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THE SURGICAL ASPECT OF GASTRIC ULCER.*

By HENRY HOWITT, M.D., M.R.C.S. (ENG.), GUELPH.

Although it is less than a decade since the attention of the profession was first specially directed to the subject, recent surgical literature contains numerous articles which bear upon the various phases to which gastric ulcer may give rise. To-day the surgical aspect is quite comprehensive, and includes not merely the operative procedures with which to meet the different forms of perforation, but it also embraces the surgical technique necessary to relieve the many abnormal conditions which may directly or indirectly arise from it. In this category we have by far the greater number of all cases of acquired stenosis of the pyloric orifice and hour-glass contractions of the stomach, the abscesses which may result from minute perforations, or infection, either in abdomen or adjacent part of thorax, and according to some authorities it includes the operative measures to arrest severe recurrent hemorrhages of undoubted origin, and also for the removal of any gastric ulcer which renders life miserable, and which persists after prolonged and intelligent trial of medicinal remedies.

In the limited time allotted to me, it will be impossible to give the details of any of the special branches pertaining to the subject, and most of them, if mentioned, will have necessarily little more than a passing notice.

Just a word in regard to the etiology. Our authorities mention traumatism, emboli, hyper-acidity of gastric juice, etc. We may enquire why jugglers can swallow pieces of glass, knives, nails, and other similar articles without ulceration necessarily following? It is admitted that, as a rule, gastric

* The discussion on Surgery read at the Ontario Medical Association.

wounds heal kindly in the absence of perforation. On thinking, it strikes one quite forcibly that the etiology depends on more than one condition—a micro-organism, a congenial environment for its growth, and probably an avenue of entrance. Does it not stand to reason that if these conditions be present we will certainly have arterial emboli, necrosis, digestion of the dead tissues, and the inevitable result—gastric ulcer? View the subject from another point. Did it never strike you as being peculiar that the best medicinal remedies for the disease (nitrate of silver, creosote, bismuth, and their relations) are germ destroyers?

Since the surgery of gastric ulcer includes phases before as well as after perforation, it is better, in order to avoid confusion, to first take up the procedures for dealing with the ulcer, or its results in which perforation is not a factor.

The field is new, the work is in a primitive state, consequently there is ample reason for divergence of opinion and discussion, therefore we should proceed cautiously, ever bearing in mind the responsibility that by right rests upon us. In these cases time is not an all-important factor, as is the case after perforation. Therefore, every reasonable medicinal remedy and means should be given an honest trial with favorable environment before we countenance active steps. With our present knowledge, it perhaps would be a good rule not to advise operative treatment unless we are sure that the patient has stenosis of the pylorus, hour-glass contraction of the stomach, or some other condition incompatible with recovery, by simpler means. The surgeon should be a man of experience in abdominal work, of sound judgment, of known dexterity and resource. On the other hand, when the signs indicate inevitable disaster by anything short of surgical aid, we should not, as it were, stand by with folded hands till the unfortunate person is merely skin and bone, tottering on the brink of the grave.

For all the operative procedures it is essential that every precaution should be taken to prevent infection of wound by surgeon assistants, instruments, or anything that may be brought in contact with it. The stomach should be thoroughly washed with aseptic water by means of a siphon tube immediately before the anesthetic is administered.

In consequence of the absence of infection of the peritoneal cavity, it is not necessary to make the abdominal incision as extensive as when such exists. A median incision, extending from near the ensiform cartilage to the umbilicus, is the one generally adopted, but there is no valid objection to adding one at right angles to it, should the operator consider it advantageous.

The differential diognostication between pyloric stenosis and hour-glass contraction of stomach presents difficulties, and may be impossible when the latter is situated near the outlet, for here the clinical history and symptoms are nearly alike in every respect. But ordinarily, by noting the amount of fluid that can be introduced, and that which can be obtained shortly afterwards with siphon tube, by observing the contour of epigastric region when the organ is distended and otherwise, and by the intelligent use of the X-rays when the stomach contains subnitrate of bismuth in suspension, we may generally distinguish between the two conditions. However, it is not of great importance, for both, when severe, are amenable only by surgical means, and the technique of which is nearly alike.

STENOSIS OF PYLORUS.

The operative procedure to be adopted depends wholly on the state in which the pylorus is found on examination. If the location of the ulcer can be easily determined, and there are neither extensive adhesions nor great thickening of the tissues, a pyloroplastic operation should be done. The part is first brought as well as possible into view, the peritoneal cavity guarded with sterilized gauze, and then the ulcer is removed by an elliptical incision running in the long diameter of the parts, the length of incision depending on the amount of contraction. It is then sutured in such a manner that when closed the line of union is at right angles to original incision. When correctly done, this procedure effectually removes the trouble and gives excellent results; but in a large percentage of cases adhesions and inflammatory changes in the parts render this ideal operation impracticable. Under these circumstances, what should be done? Pylorotomy is too severe a measure to be considered, unless we fear malignant changes. It is better to resort to gastro-enterostomy. The ulcer, or its cicatrice, is removed provided this can be easily accomplished, and then the jejunum, preferably by means of a Murphy button, is anastomosed either to the anterior or posterior wall of the stomach, as near the pylorus as the state of the tissues will permit, and a little above the line of greater curvature. There are objectionable features in the button, but on the whole it has fewer of them and more good qualities than any of the other methods.

In a paper read before the American Association of Obstetricians and Gynecologists in September last, I believe I had the honor of first calling attention to two practical points bearing on the matter. The first is to make sure before anastomosing that the proximal arm of jejunum is sufficiently long to pre-

vent tension in any possible movement of the stomach, and the other is to anchor the same arm to stomach wall with sutures just above and an inch or more to the right of point of anastomosis. The object of the first mentioned is obvious. The anchorage of the proximal arm in position stated does away with the spur or acute angle of the bowel, and prevents untoward events which frequently prove detrimental after gastro-enterostomy.

HOURLY CONTRACTION OF THE STOMACH.

In it, as in obstruction of the pylorus, the operator will have to be guided in the choice of procedure by circumstances. However, as a rule a gastro-plastic operation is the one to be preferred. In the performance of it the very same principles govern that do in pyloroplasty. The extent and irregularity of the constriction may make two or more incisions, instead of one, advisable in order to regain the normal contour of the organ.

A number of operators prefer gastro-anastomosis; that is, making a communication between the two compartments of the organ near the normal position of the greater curvature. It gives results that leave little room for improvement, and should the precarious state of the patient be such as to forbid a prolonged operation, it is undoubtedly the best course to pursue in the majority of cases. Gastro-enterostomy is the only safe procedure when the hour-glass contraction is near the pyloric orifice, and complicated by adhesions and inflammatory thickening of the parts.

There are instances on record of local peritonitis resulting from gastric ulcer leading to the formation of adhesion so placed as to cause serious interference with the function of the pylorus, the division of which was followed by complete relief.

As yet it is a moot question for future developments to decide whether it is ever justifiable in the disease to operate with the sole object of arresting hemorrhage. Although successful operations have been reported by Roux, Guinard, Kuster and others, still on the whole the results have not been good. The same may be said in regard to operations for the relief of pain and vomiting in uncomplicated ulcers.

We now come to perforating ulcer of the stomach. According to different authorities, the frequency of it is estimated at from 6 to 18 per cent. of all cases of gastric ulcer; probably 8 per cent. is not far from what actually occurs. It is not by any means of rare occurrence, and few medical men have been long in practice without having some experience with it.

The first successful operation upon this continent was performed in Toronto by Dr. Atherton in 1894, and the first on

record by Heusner in 1892. Up to last September, in the neighborhood of three hundred operations were reported in which the mortality was over 45 per cent. Recently the results have been much better. Success depends largely on early recognition and promptness of action, but the size and situation of the perforation, the nature of the infectious material present, the duration of the time after last meal and the perfection of the technique of operation are also important factors.

There are no reliable symptoms that are indicative of impending perforation, but fortunately in over 90 per cent. of the cases there is a previous history of dyspeptic troubles. When it occurs, the most reliable of the early symptoms in the acute form are sudden onset of excruciating pain in epigastric region, shock generally of a severe character, rigidity of abdominal walls, marked suppression of abdominal respiratory movements, arrest of peristalsis, and shortly all those of acute septic peritonitis. At first the pulse and temperature are not reliable, for as a rule they do not indicate the gravity of the trouble until too late for the surgeon to act with reasonable prospect of success. In my opinion this is a very important point to note in order to avoid under-estimating the true condition of things, for in the three cases that came under my personal observation both were at this period in every respect apparently normal. If the pain radiates in a severe manner into the back, it betokens perforation of the posterior wall of the organ, and if it does not do so the chances are that the trouble is on the anterior wall.

It is well to bear in mind that in the majority of patients the situation of the greatest suffering changes, at times rather quickly, owing to the irritating material gravitating downward toward the pelvis. According to my experience it descends more frequently to the right than to the left of the median line, and the anatomical position of the organs favors the course. Thus it is that cases have not unfrequently been diagnosed as appendicitis. Opiates mask the symptoms more or less completely, and on this account should not be given until the diagnosis is made.

The third person on whom I operated for acute perforation, when first seen by me only complained of pain when firm pressure was made over the appendix. The initial symptoms had been exceedingly severe, but large hypodermics of morphine had given complete relief, and at the time of my visit the patient was quite comfortable, talked, laughed and made light of the trouble. Temperature normal, pulse 76; no noticeable abdominal rigidity, nor pain on pressure over stomach; notwithstanding, an operation immediately afterwards showed a perforation in posterior wall of stomach, general infection of

the peritoneal cavity and more than a pint of pus in pelvis. When the perforation is minute, especially if adhesion protect the part, the situation of pain will not change.

Gastric ulcer may at times be latent and lead to perforation without presenting beforehand a single sign of the impending disaster. The worst forms of the malady belong to this class, for here the ulcer runs too rapid a course to permit the formation of protecting adhesions.

Treatment.—As soon as we are satisfied that perforation has taken place, I believe it is good practice to give morphia hypodermically, while preparations are being made for operation. It relieves suffering, mitigates the shock, and, in the opinion of many, lessens the amount of anesthetic required to produce surgical anesthesia for a given time. Success largely depends on the shortness of the time that elapses before operation,—every minute is of importance, and delay is dangerous.

In the acute form the septic material is widely distributed in the abdomen, therefore the abdominal incision should be made in the median line, and sufficiently large to enable the operator to inspect by sight every portion of the cavity. It is my practice as soon as the incision is completed to at once eviscerate the bowels. This cannot be done satisfactorily when, as is generally the case, there is much tympanites present, but one or more small incisions in the prominent coils soon overcomes the distention. The temporary enterotomies are made in the circumference of the gut opposite the attachment of mesentery, and each one is closed before another is made. The eviscerated bowels are protected with sterilized gauze, which is kept warm and moist by irrigation. These procedures give us relaxed abdominal walls and ample room in which to make a thorough-inspection.

Attention is now turned to the stomach; the part perforated is brought as well as possible into or out of the wound, the ulcer excised, and the opening closed with two or three layers of silk sutures. If the pyloric orifice is contracted by the ulcer we proceed as stated above in dealing with the stenosis of the part. When the trouble is in the posterior wall near the esophageal opening, it may be impossible to excise it, in which case it can generally be inverted and closed by layers of sutures. The abdomen should be thoroughly flushed with a large and somewhat forcible stream of normal saline solution, great care being taken with each flank, the pelvic cavity and lesser peritoneum. When drainage is necessary, the tubes or gauze should not be introduced through large wound, but through stabs as far from it as possible. The object should be to have primary union take place in the incision.

On replacing the bowels in the abdomen, it is well before

closing the wound to spread the omentum carefully over the surface of the small intestines and to fix it below with a suture in order to prevent the possibility of a coil becoming adherent to the line of incision. The wound, after the sutures are in place, should be dressed with dry sterile material and sealed so as to prevent infection by discharge from drainage tubes.

I am aware that many strongly object to evisceration and to temporary enterotomies, but practical experience has taught me that it is impossible to accomplish the object in general septic peritonitis without resorting to them. Contrary to the general opinion of the profession, I maintain that when these procedures are done with ordinary skill, instead of adding to the shock they produce the very opposite effect by making an otherwise almost impossible work comparatively easy. Moreover, enterotomy, by relieving bowel distention and permitting the escape of germ-laden matter, renders afterward vomiting and bowel paralysis much less probable.

The after treatment consists at first of the external application of heat, hypodermics of strychnia, normal saline solution, either by rectum or subcutaneously, and nutritive enemata. No food by mouth for four or five days. There is no objection to the patient having sips of warm water after the expiration of twenty-four hours.

It has fallen to my lot to operate three times for perforated gastric ulcer. All the patients are alive and well to-day. In two of them every portion of the peritoneal cavity contained pus, and partially organized flakes of lymph, and I am convinced that both would to-day occupy a grave had evisceration and enterotomy not been carried out.

In my paper, to which reference has already been made, attention is directed to the advisability in desperate cases of injecting a pint of peptonized milk, or other suitable nourishment, during the operation into the jejunum, and also when constipation is a factor, a saline cathartic into ascending colon. Both procedures may be accomplished in a few minutes by means of normal saline apparatus, but the needle should be large.

The local abscesses which result from minute perforations, when discovered, merely require to be treated in accordance with general surgical principles.

EXCISION OF THE UPPER JAW FOR SARCOMA, WITH PRESENTATION OF THE PATIENT AND SPECIMEN.

By HERBERT A. BRUCE, M.D., F.R.C.S., ENG.
Associate Professor of Clinical Surgery, University of Toronto.

Mr. President, and Gentlemen :

The patient whom I wish to present to you to-day is a woman, Mrs. C., age 34, whose upper jaw I removed for sarcoma. She was referred to me by Dr. George H. Bowles, of Woodhill. Her history is briefly as follows: About the last week in January she felt for the first time a slight swelling over the alveolus of the left upper jaw, which she thought was a gum-boil. She consulted Dr. Bowles about the end of March, and I saw her with Dr. Bowles the middle of April.

On examination I found a very hard swelling commencing just behind the second bicuspid, and extending backwards to the full extent of the jaw. Internally the mass did not extend quite to the middle line, and bulged externally to the extent of half an inch beyond what would be the line of the teeth, and extended upwards towards the antrum, but latter did not seem to be implicated externally. The growth in the roof of the mouth was irregular, covered everywhere by mucous membrane, and was not covered by bone, but seemed to be covering hard palate and alveolus. On looking into the nose a polypoid mass was seen, and the patient could not breathe properly through the left nostril. The cheek on the affected side was slightly more prominent. The skin of the cheek moved quite freely over the growth, and did not seem to be adherent to it. No prominence of the eye on the affected side was made out. A small portion of the growth was removed with cocain, and Dr. Silverthorn reported it to be a sarcoma, containing spindle cells, with a cartilaginous basis. I removed the jaw on April 29, 1901, assisted by Dr. Silverthorn, at St. Michael's Hospital, and the patient left the hospital on May 18th, having made an uninterrupted recovery.

The incision which I used in this case was the one originally proposed by Fergusson, and I think it leaves much less deformity than any other. The growth was very much more extensive than I had thought at first, in fact, than one could possibly make out previous to operation. A portion of it had extended into the nostril, and a large, hard mass into zygomatic-fossa and into the na-o-pharynx, and another portion had extended up into the orbital fat, having caused complete absorption of the floor of the orbit, except the anterior border.

Dr. G. Silverthorn has very kindly made sections of the growth, and I will ask him presently to give you a description of the exact nature of the growth, and to show you the specimen, together with sections under the microscope. I am going to have a dentist make an obturator for the patient, and when this is done I think the deformity will be very slightly noticeable. Owing to the complete absorption of the floor of the orbit, the eye has become slightly displaced, and in order to prevent her vision being blurred, I have ordered her a pair of glasses, with an opaque glass on the affected side and a clear glass on the other, so that with these spectacles she can see perfectly. I might say that the eye sight on the affected side is perfect if the other eye be covered. As to prognosis, I think in this case it is extremely good, as the growth was chiefly a chondro sarcoma, and we were able to get entirely beyond it. In connection with the removal of a growth of this kind, I might say that one would expect a very large and alarming amount of hemorrhage. There is a considerable amount, but it is easily controlled with sponge pressure and forceps. Care has to be taken, of course, that the blood does not get into the larynx. After all larger bleeding points are secured, there may still be oozing from the large raw surface, and in this case I had a sponge on a holder applied to the surface, and pressure kept up by the nurse for six hours afterwards. The raw surface was rubbed over with iodoform dissolved in ether. As to the after treatment, it is very important to keep the part as thoroughly aseptic as possible. This we accomplished by spraying with 1 in. 60 carbolic solution every two or three hours the first week, and using hydrogen-peroxide about twice a day. In addition to this the surface was swabbed over about once a day with 1 in 20 carbolic acid solution.

Diagnosis.—In the diagnosis of these tumors of the upper jaw, there are three principal points to be attended to: 1, To distinguish the growth from fluid accumulation; 2, to determine whether it be simple or malignant; 3, to ascertain its primary seat.

1. In making the diagnosis from fluid accumulation in the antrum, the history of the case, and the uniform enlargements of the cavity without localized projection beyond any part of its walls the elasticity, and even the fluctuation that may, after a time, be detected, more particularly towards the outer side of the swelling, and at the junction of the mucous membrane of the cheek and the gum, will enable the surgeon to determine that it is not solid. But in many cases this is not sufficient, and it becomes necessary to make an exploratory puncture by means of the perforator, through one or other of the more thinned and expanded parts already indicated.

2. In determining whether the growth be simple or malignant, the surgeon will experience much difficulty, so long as it is confined to the cavity of the antrum, but when once it has perforated and passed beyond its walls, this point is easily solved. Yet, even whilst the tumor is still confined within the antrum, much light may be thrown upon its nature by attention to the rapidity of its growth; the greater this is, the more reason to suspect that it is malignant. Too much importance, however, must not be attached to this sign, for though as a rule fibrous, cartilaginous and bony tumors may increase less rapidly than the malignant, yet they may attain a very great bulk in a very short time. The age of the patient is of very little value in the diagnosis; I think, however, as a rule that the simple tumors occur more frequently in the young, whilst the malignant forms of the affection are more commonly met with in the middle and advanced periods of life. It must be remembered, however, that the sarcomata, which runs an essentially malignant course, infiltrating surrounding parts, and recurring in internal organs, do not, as a rule, affect the lymphatic glands. When once a malignant tumor has passed beyond the cavity of the antrum, and is thus relieved from the pressure of its walls, it grows with great rapidity, and where it can be felt under the skin is perceived to be soft and elastic. Its early protrusion into the nasal cavity and orbit is especially characteristic of its malignancy. It implicated the integuments of the cheek with an inflammatory edema, and the soft structures within the mouth, and throws out fungating masses in these several situations.

3. A point of very great importance in relation to operative interference is to determine the primary seat of the tumor, whether it springs from the cavity of the antrum, from the malar bone, or from behind the superior maxilla in the pterygo-maxillary fossæ. When it springs from the interior of the antrum, the buccal, orbital, nasal, or palatal walls of the cavity are expanded, and the line of teeth is rendered irregular. When the tumor primarily springs from the malar bone it pushes forward the cheek into a somewhat conical prominence, and dips down into the mouth between the gums and the soft structure of the face. It does not involve the palate or alter the line of the teeth, but rather spreads over the bones, and involves the soft parts by continuity of tissue, without any definite anatomical disposition. As the tumor increases in size, it will involve the anterior wall of the antrum, and project into that cavity. When the disease develops primarily behind the superior maxilla, between it and the great wing or the pterygoid process of the sphenoid the upper jaw bone is simply pushed bodily forward, there being little, if any, deformity in its out-

line, the line of the teeth not being displaced nor the walls of the antrum expanded. Yet it must be borne in mind that the difficulty of diagnosis is greatly increased by the fact that a tumor, though not originating in the antrum, may find its way early into this cavity, or may pass into the orbit through the sphenomaxillary fissure, and make its way forward amongst the bones of the face.

Treatment.—In the treatment of tumors of the upper jaw and antrum, nothing can be done except to extirpate the growth. When once a malignant growth of this part has passed beyond the osseous boundaries of the antrum, the question of removal becomes more difficult to decide. In reference to this point, I think that it may be stated generally that, if the cheek be freely movable over the tumor, and the lymphatic glands unaffected, the operation may be undertaken.

Complete Excision of the Upper Jaw.—The operation of excision of the whole upper jaw, together with the malar bone for tumor of the antrum, was first proposed by Lizars in 1826, though Gensoul, of Lyons, was the first man by whom the operation was actually performed, in May 1827. Since then it has been practiced repeatedly, and the names of Liston and Fergusson are inseparably connected with it, for the skill with which they devised, and the boldness with which they carried out the various steps of its performance.

Dr. Silverthorn, to whom I submitted the specimen for examination, reports as follows:—

Left upper jaw, with tumor attached, removed by the usual incisions and saw cuts for excision of the upper jaw.

Left central incisor has been recently removed, lateral incisor and the two bicuspids still intact and healthy.

In the usual situation of the three molars no trace of them is to be found, but extending from the second bicuspid backwards to the end of the alveolus, and internally to nearly the sawn edge of the bone, and outwardly one-quarter inch past the line of the alveolus, is a whitish mass somewhat uneven on the surface and projecting downwards one-third inch past the level of the palate.

This mass rises gradually from the bone all around, and is not pointed, but is unevenly flat on the surface, and is covered with mucous membrane intact, except for a new scar on its most prominent part, where a small portion was removed some days ago for microscopical examination.

This mass is hard to the touch, but is not "bony" hard, and on being cut into seems to be somewhat cartilaginous for a distance and then hard, gritty spicules are met with.

The anterior part of the upper jaw is intact to the line of the saw cuts, and includes the orbital plate, and this extends

backwards along the floor of the orbit for a distance of about one-half inch in an irregular line, until it meets with the upper surface of the tumor mass, which mass then forms the upper surface of the specimen and extends backwards for one and a half inches, and projects only slightly above the level of the floor of the orbit. The inner border of the upper surface ends in a flange-like portion standing upright, one-eighth inch thick, and projecting somewhat higher than the main mass. (This mass was to be seen in the nose.)

The main mass of the tumor is now to be seen fitting tightly the whole antrum cavity, bulging somewhat into the nasal space, encroaching on the orbital space, involving in its mass the postero-lateral and posterior walls of the antrum, the palate bone, the lower part of the pterygoid process of the sphenoid, and the alveolar process from the second bicuspid backwards, and part of the hard palate.

The mass is hard to the touch, whitish in color, smooth on the surface, and irregularly knobbed or superficially lobed.

Posteriorly there are two large knob-like processes extending backwards, one as large as the terminal phalanx of a man's thumb, and the other one about half that size. These knobs are deeply separated from the main tumor mass by a sulcus corresponding to about the depression between the superior maxilla and the pterygoid process of the sphenoid. At the inner end of this sulcus are spicules of bone apparently corresponding to the point of fracture of the pterygoid process, and these are the only traces left of the postero-lateral and posterior walls of the antrum, the palate bone, and the lower portion of the pterygoid process. Part of the muscles and the tendons of origin of the pterygoids are seen attached to and entering into the mass between the two knobs just described.

On separating the tumor mass from the intact anterior portion of the superior maxilla, it is found that the line of fracture extends across the base of the tumor just above the mass described as appearing in the mouth, and corresponding to the posterior of the alveolus. Here we see that the posterior portion of the alveolus from the second bicuspid backwards, the postero-lateral and posterior walls of the antrum, the palate bone, the lower part of the pterygoid process, and part of the hard palate, disappear in the substance of the tumor and from them radiate spicules of bone widely in the tumor mass.

Microscopical Examination.—The portion removed from the growth in the mouth for diagnosis showed microscopically short spindle cells in a matrix of more or less myxomatous tissue, becoming cartilaginous in the older portions of the growth. From this the diagnosis was made of malignant disease.

Sections prepared from other portions of the growth showed the same characteristics, except that the margin of the growth for a short distance was more distinctly sarcomatous, and in the deeper portions the cartilaginous change was very marked.

Deeper still there was true bony formation in a more or less perfect condition, and giving one the impression of a skeleton of bony spines radiating through the growth, with a tendency to extend vertically from the surface of the bones.

This would then be called an osteo-chondro-myxo-sarcoma.

Selected Article.

MEDICAL EXPERT EVIDENCE.

BY E. F. B. JOHNSTON, K.C., TORONTO.

Owing to the increased number of actions founded on negligence and the modern methods of conducting criminal trials, evidence of experts has become an important factor in cases at Nisi Prius. Thirty years ago, the presence of a number of medical men as witnesses, for the plaintiff and defendant respectively, was very unusual. The plaintiff called the medical attendant, and his report was generally accepted as sufficient on that branch of the case. His evidence has now to be supported by several medical experts, by reason of the fact that the defence is certain to call several doctors, either to combat the allegation that the loss is due to the injuries complained of, or to minimize the amount of damage which the plaintiff seeks to recover. The same practice, to its fullest extent, holds good in cases involving mechanical construction and operation, and has also been adopted in the trial of issues turning upon disputed handwriting. Perhaps the increase in the volume of this class of evidence is more marked in criminal prosecutions and defences, when death is alleged to be the result of poison or external injury, than in other trials. It is not unusual, at the present time, to find in criminal trials a dozen doctors on each side, and in many instances medical opinions for the defence are found to be totally opposed to those on behalf of the Crown.

The reason for this condition of matters becomes apparent when we consider the methods of modern practice. Cases are now prepared more minutely, if not more thoroughly, than they were many years ago. Every detail is worked out, and every point of the adversary is anticipated. More money is expended in preparation and trial than formerly, and counsel are now dealing much more with the scientific elements of a case than they once did. Indeed, to be a successful counsel, a thorough knowledge of surgery and mechanics seems to be as requisite as familiarity with the law. This being so, it becomes a serious question to consider what weight ought to be attached to this kind of evidence, and whether the judge who relies greatly upon its value in charging a jury, or the judge who entirely ignores it, is in the safer channel.

Some judges, here as well as in England, are, it is well known, apt to criticize adversely opinion evidence, and they

point to the undisputed fact that ten medical men, for instance, will swear to certain causes and corresponding results, only to be flatly contradicted by eleven other equally eminent practitioners, and they, not unnaturally, perhaps, come to the conclusion that the evidence of medical men is moulded in the interest of the partisan. This conclusion may occasionally, but, I think, very rarely, be justifiable.

Members of the medical profession in Canada stand quite as high, and are actuated by as pure motives, as members of the Bar, and it very often happens in practice that medical experts who have gone into the case with the counsel or solicitor engaged, are not called because their conclusions are adverse to the party in whose interests they have been consulted. Medicine is not an exact science—perhaps not so much as law. In numberless cases, the symptoms of the patient are purely subjective, and he misleads his doctor much more easily than the client misleads his legal adviser, either by the suppression of facts or by the coloring of matters wholly within his own knowledge.

Opinions must differ, and it would be as reasonable to make sweeping charges against judges who differ from each other, as to make similar charges against medical experts. Neither the judge nor the expert is speaking from a knowledge of actual facts as distinguished from evidential facts. Certain facts may be reasonably proved; others remain in more or less doubt. The medical man forms his opinion according to his best judgment on the facts as they are disclosed to and appreciated by him. The judge does the same thing. Both are liable to be mistaken. Other medical men and other judges differ from these opinions, and it would be cruel and unjust to say that those who differ are actuated by improper motives. The fact that one opinion is given under oath, and the other only indirectly so given, can make no difference, because the conclusions in each case are opinions at best, and the procedure in arriving at such conclusions is similar in both instances. Out of ten judges, five may find for the plaintiff and five for the defendant. All of them may be, and no doubt are, honest in their opinions. If therefore judges differ, with abundance of precedents and legal lore in unbiassed black and white before them, and with certain fixed principles, which cannot in themselves be guilty of motive or feeling, to guide them in forming a judgment, how much more may it be expected that medical experts will differ in their opinions, when so much depends on the diagnosis, the foundation for which often lies entirely within the control of the patient?

The ordinary lay witness is called to testify to a fact. Do we always or ever get the actual fact, or is it only the

opinion of the witness which we get?—an opinion which depends for its value on many factors, such as observation, opportunity, circumstances, appreciation, the senses, preconceived ideas, mental condition, etc.

In the late unfortunate occurrence of shooting a constable, several apparently truthful and personally disinterested witnesses were called to give a description of the man who supplied the weapons. No two of these witnesses agreed, and yet each was supposed to be describing an actual fact which occurred before his eyes and within a few hours prior to the evidence being given. What is this but opinion evidence? A car is running at fifteen miles an hour, and we will suppose this is capable of being established by scientific means as a certainty. Twelve men, the most reputable in the neighborhood, testify as to the speed of the car. They will be found to vary from perhaps ten to twenty or twenty-five miles an hour in their evidence on the question of speed. This again is opinion evidence, its correctness being dependent upon some of the many factors above alluded to. The mere repetition of a conversation is often more the result of opinion as to what the speaker said, than it is of the actual words spoken by him. One reason for this state of things is that our appreciation and knowledge of facts are purely relative, and to the extent to which the relation is defective or in error, to that extent the evidence is distant from the line of exactness.

In dealing with a question of this nature, we cannot overlook the principle necessarily underlying all evidence. Facts, as such, in reality cannot, as a rule, be presented to the Court. They can only be established through witnesses, and the facts that are proved are those established by the evidence, and not the real facts themselves. The real fact may be, and doubtless often is, quite different from that proved. A judge or jury pronounces on evidential facts. These facts reflect, to a greater or less extent, the mental bias and feeling as well as the imperfections of the witnesses. The evidence is but the impression made by the reality. It is a conclusion arrived at by mental process through the senses. Is it, therefore, much higher after all, than what is known as mere opinion evidence?

If this argument be correct, there is, therefore, but little distinction to be drawn between the evidence of the medical expert and that of the ordinary witness, assuming both to be equally honest. The testimony of either is generally to be more relied on than that of the party litigant. Medical men differ in the witness box in no greater degree than they do in the treatment of a patient, and it would hardly be safe to argue that they administer medicine with a bias or from improper or interested motives. *Very great weight ought to be*

given to the evidence of medical experts who stand well in their profession, even when grave differences exist in their opinions ; just as a counsel attaches a high value to the opinions of judges whose judgment may be against the counsel's contention.

It is because medical men honestly differ that they are called as witnesses, and in that difference, the jury may often reach the truth. Upon a question, with which the lay mind is not familiar, what after all is the best evidence? Take the case of an accident as an illustration. First, the mechanical side of the question comes up for discussion. Who is better qualified to speak on the subject,—the counsel and the lay witness, or the man whose whole life has been devoted to working or perfecting the machine in question? Then the medical or surgical phase must be dealt with. Shall the locomotive engineer or the man who runs the saw in the mill be taken as a witness in preference to the physician or surgeon, whose education, practice, and experience have made him eminent in his profession? If truth is the objective point, one would naturally go to those who should know most concerning the matter. If a verdict only is looked for, then the verdict might as well be given without evidence as with it. What would any court say if a blacksmith were called to testify as to the law in force in a foreign state? What would the same court say if a judge were called as a witness to speak as to the extent and consequences of the bodily injuries complained of? It is always of vital importance that the exact character of bodily injury or disease should be established. How can this be established except by the opinions of medical men? We trust our lives and the lives of our families to these medical men. Why should we not trust our private rights of a civil or criminal character to the same judgment? It is of the greatest importance to the man who is prostrated by disease to have honest and careful opinions regarding his position and treatment. We accept these opinions from our attendant physician. Why should we impute wrong motives to medical men, when only a few hundred dollars are at stake, instead of a life? Why should we harshly criticize or ridicule the evidence of those who are highly respectable members of the community and well-known reputable men in their profession, when we trust them in the ordinary business transactions of life, and in whose hands we are willing in time of trouble to place our physical and mental safety? Under such circumstances, it seems reasonable that the evidence of such men ought not to be lightly treated, nor should their opinions be looked upon as of less weight and value than the evidence of any other witness.

It is true there is a rare specimen of the medical expert witness who sees nothing but that for which he is paid to see. He is a partisan of the worst description, and doubly dangerous, because he knows he is beyond the reach of the law as regards perjury. Not content with giving an opinion which is measured by the money of his employer, he is ready to invent all kinds of reasons, theories, and excuses to contravert well established principles or clearly proved facts. Instead of answering a question, he proceeds to deliver a lecture from the box. It is almost impossible, from such a witness, to get a definite answer to any question, however simple. This specimen of the medical expert is the most dangerous of expert witnesses. His glibness is equalled only by his moral obliquity. His readiness in explanation is largely the result of an unscrupulous, scheming mind. Falsehood under oath is a matter of no moment to him. He may at times accidentally tell the truth, but it may be safely conceded that he should on all occasions be discredited. The man who wilfully admits nothing except that which tells in favor of his client, is dishonest, and should not be believed. Such evidence, fortunately, is very rare in our courts, and it would not be fair to condemn the whole medical profession by reason of the crookedness of one or two individual members. No continued harm can be done by such a witness, as the judges need only one or two repetitions of such conduct to enable them to place witnesses of that character in a proper light before a jury.

In order to remove this class of expert evidence from the region of discussion, and put it beyond any imputation of partisanship, several proposals have been made. The most feasible would appear to be that providing for the appointment of a medical board of witnesses. The first qualification of the members would be competence and experience, and the second, their moral standing in the profession. We have now in practice a very limited application of this principle. A medical man is frequently appointed by the court to make an examination and report with regard to the injuries and condition of the person complaining. This, however, is not of any great practical value, because in many instances his evidence may be literally swamped by a large volume of equally credible testimony, adduced on behalf of the party affected adversely by the report. In cases of crime where insanity is urged as a defence, a board of say five medical men would be very satisfactory. Appointments to the board would be made by the court, but the law would no doubt make provision for all parties interested being represented before the judge making the appointment. In negligence actions, the same principle might apply, but limiting the membership of the board to three

medical men. With reference to issues involving mechanical or scientific construction or operation of machinery, a similar board of skilled artisans, engineers, or machinists might be constituted. These boards would pass upon the question specially submitted to them, and the members would be subject to cross-examination to the same extent as the expert witness is under our present practice. The evidence required in these cases partakes somewhat of the nature of the judgment of the court, and the appointment of a board of skilled witnesses is analogous in principle. Two men cannot agree upon the facts necessary to determine their respective interests, or upon the law governing their relative rights. Figuratively speaking, they call in a judge to determine the matters in issue. He determines the matter in the capacity of a skilled expert. The party dissatisfied goes to a court composed of several judges, and there seeks what he thinks is the redress to which he is entitled. The proposition as to expert evidence takes the opinion of the larger court of three or five experts in the beginning instead of at the end, but the same result is reached. If this or some similar scheme were adopted, there would be a great saving of expense, and the evidence would perhaps be more satisfactory to the judges. Under some such system, there would certainly be no ground for suspicion as to the honesty of medical expert evidence, and there can be no doubt that the parties to the action would continue to receive the full benefit of those differences of opinion, which do now, and always should, exist between medical men who are called upon to make practical application of a science beset with grave difficulties and fraught with the most serious problems of life.

—*Canada Law Journal.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. M. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Pneumococcic Peritonitis.—(Continued from July issue.)

We know that the pneumococcus is the habitual guest of certain natural cavities in man, especially of the mouth and lungs. We must not, therefore, be surprised to see the development of a pneumococcic infection, under special circumstances which have as their result the awakening of the virulence of the microbe or the diminishing of the resisting power of the tissues which lodge it. Generally, the pneumococcic infection in man is localized in the lungs. It is not rare, however, to find other organs attacked, either primarily or secondarily. Observations, becoming more and more numerous, prove conclusively that no tissue, no organ, is safe from it.

The mechanism of the primitive infection is easily understood :

“The pneumococcus, an impartial guest of the cavities, suddenly puts forth all its virulence. Hence angina with false membranes, otitis, meningitis, metritis, and perhaps peritonitis. Secondary affections are caused by the fact that the germ borrows the lymphatic channel, or rather the blood channel, in order to swarm through the organism, creating thus a general infection, whence phlegmasia, endocarditis, pericarditis, arthritis, etc.”—(A. Lippmann.)

Among the various results produced by the pneumococcus on the respiratory system (pneumonia, broncho-pneumonia, bronchitis, pulmonary congestion); on the circulatory system (endocarditis, pericarditis); on the digestive system (angina, stomatitis, peritonitis, gastritis); on the nervous system (cerebro-spinal meningitis, paralysis); on the locomotor mechanism (periostitis), etc., there are some which interest the surgeon more particularly. We will mention pleurisy, periostitis, otitis, pneumococcic arthritis and pneumococcic peritonitis.

The case of pneumococcic peritonitis which we described (translated in July issue of *CANADIAN PRACTITIONER*) must be considered, from its development and its progress, as of primitive character. Weichselbaum, Waterhouse and other authorities admit the possibility of primary pneumococcic peritonitis. We shall not discuss the path which the germ may have taken in order to invade the peritoneum, nor what were the probable causes of this contamination of the peritoneum, not having

positive elements for such a discussion. We admit, then, that in our case, under the influence of some unknown cause (diminution of resisting power of the patient or exaltation of the virulence of the pneumococcus) the microbe, which had remained dormant up to that time, was able to develop directly its injurious effects upon the peritoneum, and to give rise to the inflammation above described.

The symptomatology of pneumococcic peritonitis is clear and typical. The history of our patient gives an exact and faithful reproduction thereof. The beginning is abrupt and sudden. The first sign is a violent abdominal pain with elevated temperature (39° - 40° C.). At the same time occurs abundant vomiting, accompanied by fetid diarrhea. This morbid picture is continued for a few days, with some improvement of the pain and vomiting. Soon a change of the symptoms is observed; the fever disappears, but—an important fact—the abdomen increases in size as a result of the presence of an exudate. Finally—a symptom almost pathognomonic, upon which Brun has especially insisted, there is produced at this time a redness and protrusion of the umbilicus. If one delays intervention, abscess forms here, bursts and gives issue to a peritoneal discharge consisting of greenish, creamy pus with abundant fibrinous false membranes. This is a termination which sometimes leads to recovery, and indicates the plan to adopt in the treatment.

Left to itself, pneumococcic peritonitis has a most gloomy prognosis (85 per cent. of deaths). The rational treatment of this disease, whose value experience has indisputably proved (at least 80 per cent. of cures), consists of exploratory laparotomy, cleansing the pus pocket and drainage through the vagina.

In a discussion which took place in the Surgical Society of Paris on a case of general peritonitis (Malapart, 1897), all the surgeons were unanimous in admitting the relative safety of pneumococcic peritonitis treated by laparotomy.

In one case we were not so successful, though the patient markedly improved after the operation. The autopsy showed that a large intestinal perforation occurred—this was the cause of death. This complication must be attributed to the infective agent, which has been known to produce a similar effect on the stomach. (Certain authorities state that gastric ulcer of pneumococcic origin is not rare.)

As for the prognosis and treatment of pneumococcic inflammations in general, it is, as Lippmann says in closing his excellent monograph, in the search after immunization against the pneumococcus that we must hope to find an abortive medication, not only pathogenic, but truly specific.—Translated from *Annales de la Société Belge de Chirurgie*, by HARLEY SMITH.

The Present Status of the Widal Reaction.

Although the Widal test has not so far fulfilled the hopes at first entertained, experience has shown it to be capable of affording very valuable assistance in the diagnosis of obscure cases of typhoid fever, and in differentiating this disease from others which happen to simulate the clinical aspects of the typhoid state. Opinions are at variance as to the trustworthiness of high dilutions, allowing a correspondingly protracted time for the phenomenon of agglutination to take place, as compared with the opposite plan of employing lower dilutions with a shorter period for completion. In the United States the tendency is in favor of employing low dilutions, whereas in Europe high dilutions are gaining ground. Taking a large number of cases which clinically appeared to be typhoid, only four or five per cent. failed to give the reaction, and in very few indeed of the positive cases was there any reason subsequently to question the accuracy of the diagnosis. It may be borne in mind, however, that the power to cause agglutination remains in the blood for long periods of time after recovery from typhoid. It may, indeed, remain as long as ten years, though the average duration is under five years, and this may conceivably explain a certain proportion of the cases in which the reaction has been obtained in persons obviously not then suffering from typhoid. Examination of recent statistics shows that the agglutinating power is weaker in children than in adults, that it appears earlier in the disease and does not persist so long. The agglutinating power can pass through the placenta, or may be acquired through the mother's milk; but, in either case, it is of comparatively short duration. It may be remarked incidentally, that the presence or preservation of the agglutinating power does not appear to afford immunity against infection or reinfection by typhoid. One conspicuous drawback in the employment of this test is its tendency in certain cases to yield negative results until very late in the disease. It sometimes happens indeed that the existence of the agglutinative power cannot be demonstrated until convalescence has been established, no explanation is at present forthcoming of this delay. The fact is that we are in ignorance of the precise nature of the reaction, hence we are unable to appreciate its exact significance. It may on the one hand be a phenomenon of infection, or, on the other hand, it may be a manifestation of leucocytic reaction of the development of bactericidal power. When this point has been cleared up the test may not only afford more absolutely trustworthy diagnostic indications, but it may also influence prognosis by enabling us to measure either the intensity of the infection or the energy of the protective reaction. In the meantime Widal's reaction is a most useful aux-

iliary in diagnosis, and as it has come more and more into general use, it has proved of value in many unexpected directions.—*Medical Press and Circular*.

Apoplexy and Hemiplegia.

H. N. Moyer, in *American Medicine*, notes the fact that the term apoplexy is still loosely used even by the best writers. He refers to the prevalent misconception of the relation of cerebral arterial disease to sudden death—meaning by the latter a death which takes place within a few minutes. The latter is almost never due to vascular involvement in the brain, excepting where the cardiac or respiratory centres are involved. Sudden death is almost always due to heart disease. It would be desirable if a diagnosis could always be made between cerebral hemorrhage and thrombosis, but this is not possible. In hemorrhage the treatment should be directed to lower vascular pressure, while in thrombosis exactly the opposite line of procedure should be employed. He condemns the administration of strychnine and ergot; useful as the former is in heart failure, it has no place in the therapeutics of cerebral thrombosis or hemorrhage. Cases of this kind have a fatal termination from respiratory failure, and strychnine increases vascular tension, and so precipitates the condition which it is designed to relieve. Ergot is of no value in controlling hemorrhage into the brain, but on the contrary directly favors it, because it increases vascular tension. Ergot is only of use in postpartum hemorrhage, and there it is of value because it contracts a hollow muscular organ and so mechanically occludes the vessel. It has no influence in hemorrhage into the organs in which no such muscular structure exists.—*Medicine*.

Hypodermic Medication.

After drawing the required amount of fluid into the syringe, expel the small globules of air by everting the syringe and pressing the piston upwards, until a drop of the liquid appears at the point of the needle. Draw the skin up and tense at the required place, and press the needle through into the subcutaneous tissues; which done, inject the fluid slowly into them. After the needle has been withdrawn, place the finger over the puncture for a short time. The veins, inflamed spots and bony prominences are places to be avoided in puncturing; the arm, thigh, abdomen, back and calf of the leg are places suitable for puncturing. In hypodermic medication the dose is about one-half that required by the mouth, and the effects are more rapid, certain and exact.—*Bartholow, Maryland, Med. Jour.*

SURGERY

IN CHARGE OF EDJUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

Primary Sarcoma of the Stomach.

W. Soltau Fenwick in the *Lancet*, gives the following points as diagnostic of primary sarcoma of the stomach: The spindle-cell variety and myosarcomata are chiefly characterized by their comparatively slow growth, the smooth, firm and movable tumor; the frequent absence of pain, vomiting, and anorexia: and the tendency to repeated hemorrhage. 1. The disease usually occurs before thirty five years of age: so that the younger the patient the greater the probability that the malignant affection is sarcomatous in character. 2. In many cases there is a slight, but continuous pyrexia accompanied by rapid and profound anemia, while in carcinoma fever is always absent during the early stages of the complaint and the cachexia much more gradual in its development. 3. Simple enlargement of the spleen is by no means infrequent, but is never met with in cancer unless the organ is involved in the growth. 4. According to Kundrat the tonsils are apt to enlarge and the follicles upon the side of the tongue may become swollen or ulcerated. 5. Secondary deposits in the skin occur in a notable proportion of the cases and permit of excision and microscopical examination. It should be remembered, however, that sarcomatosis has been met with in true cancer of the stomach (Leube). 6. A large nodular tumor due to infiltration of the omentum, or a greatly enlarged liver with secondary growths in its substance, are rarely met with. 7. Persistent albuminuria is often observed in sarcoma, but is exceptional in cancer. 8. The discovery of pieces of morbid growth in the vomit renders the diagnosis certain.

Tuberculous Glands of the Neck.

G. Bretton Massey advocates, in the treatment of tuberculous glands of the neck, a modification of the cataphoric method as used successfully for the destruction of cancer. The object of the method is the destruction of the bacilli by the cataphoric diffusion among them, of nascent oxychloride of mercury, developed in their midst by the electrolysis of metallic mercury held in contact with a small gold electrode. A small opening is made through the skin, and into the gland by a narrow bistoury, under a chloride-of-ethyl spray, and into the opening is thrust a sliver of amalgamated zinc to act as an anode, not insulated, of a weak galvanic current, 1 to 3 milliamperes, which is turned on gradually and maintained for a few minutes to cauterize the tract and keep it patulous for the treatment proper. When the

tract has received a sufficient impregnation with the mixed oxychlorides of zinc and mercury thus developed to keep it patulous for a few days, the zinc electrode is withdrawn and an insulated gold electrode about the calibre of a piece of No. 18 wire is inserted, its point having previously been amalgamated and made to hold as much mercury as possible. This instrument is left bare for one-quarter inch from the point only, in order that all the current-action shall be expended within the gland, the remainder of the instrument being insulated with fused hard rubber or fused shellac. From 2 to 10 milliamperes are now turned on and maintained for ten minutes or until all the mercury has been dissipated from the old surface, after which a piece of absorbent cotton or lint is placed over the opening, topped by a piece of plaster, and the patient returns at intervals of two or three days for a repetition of the application. The endermic application of cocaine may be used to deaden the slight pain of these applications, a mere drop of a ten-per-cent. solution placed in the opening being an excellent preliminary to the later applications. The purpose of the sinus thus formed is the drainage of the products of the dead bacilli and deposited chemicals, as well as for a direct application to the germ-colony.

Observations of two cases has given rise to the belief that the germicidal action is not confined entirely to the gland to which the application is made, but that the chemical deposited in this situation drain downward to the next glands in the chain and favorably influence any infection of these glands. The final result is the destruction of the tuberculous bacilli, without necessarily destroying all the gland-tissue not destroyed by the disease, and when the opening is allowed to close the scar left is a mere point, and the general health of the patient will be found to be improved. The sinus requires no special precautions against septic infection while open, by reason of the powerfully antiseptic chemicals deposited within and about it.--*Sajous' Monthly Cyclopedia of Practical Medicine, and Universal Medical Journal, July 1, 1901.*

Syphilis and the Expectancy of Life.

The following remarks made by Hyde in the *Medical Examiner* in reference to the life expectancy of those who have acquired syphilis is of considerable importance, and we clip from *Sajous' Annual and Analytical Cyclopedia of Practical Medicine*, volume vi, the following six contentions in reference to this disease: 1. Inherited syphilis is one of the most fatal of all disorders affecting mankind, and under the most favorable circumstances, apart from abortion, 90 per cent. of children born living subsequently die. 2. Acquired infantile

syphilis is rare, and is easily treated, and probably a large proportion of all infants so affected survive. 3. In acquired syphilis in adults, between 80 and 90 per cent. escape gummata. The percentage of patients affected with gummata who die probably does not exceed two per cent. 4. The expectancy of life is probably not affected by the coincidence of syphilis with other diseases, and the prospect that the patient with acquired syphilis will ever suffer from struma, cancer, or tuberculosis is exceedingly small. 5. The natural evolution of acquired syphilis in untreated cases is not in the direction of a fatal issue, but rather in the line of physical degeneration, due to involvement of the nervous system and the bones without affecting the organs essential to life. 6. It is unfair to charge an extra risk for the insurance of syphilitic applicants otherwise in sound health. The syphilitic applicant for life insurance should be examined with a view not so much as to his syphilitic history as to his condition with relation to all other items making up a satisfactory risk. In other words, if he has a good family history, a sound constitution, excellent habits, and has reached, but not passed, a satisfactory age, his expectancy of life is probably that of other individuals in similar conditions without added risk on account of syphilis.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
AND K. C. McILWRAITH.

Rupture of the Uterus in Placenta Previa.

Mr. J. Preston Maxwell (Amoy, China) read a paper on spontaneous rupture of the uterus in placenta previa. He had met with three cases of this accident. In the first, the woman died undelivered within a few minutes of the rupture; in the second, the uterus was found ruptured posteriorly after delivery, and she had dangerous hemorrhage, but recovered after antiseptic gauze-packing of the rent. The details of the third case were as follows:

S., a primipara, aged 23, had been in poor health during her pregnancy. Fortunately she was more enlightened than the majority of Chinese women, and called him in when labor began. She had weak, poor pains, and the child was evidently at full term; the cervix dilated very poorly, especially posteriorly. There was a little more bleeding than usual, and this, combined with the irregular dilatation of the os, which would admit two fingers, caused a suspicion of placenta previa, and

the edge of the placenta was felt behind. As she lived close by, it was decided to get her into a better condition by procuring some sleep, and to that end she was given a dose of chloral and bromide. She went to sleep, and when next visited about twelve hours after, the cervix had closed up, and admitted one finger with difficulty. There was no further hemorrhage, and at the end of fourteen days labor came on and the os dilated, but still it did not dilate well behind. When nearly dilated he left the room for some two or three minutes, but returning, found she was beginning to bleed badly, and he at once ruptured the membranes, and, the child's head coming down, placed his hand on the uterus and kept it there, but without in any way stimulating it. At the end of ten minutes the child was born without assistance. The moment it was out of the vagina blood simply pumped out, and death appeared imminent. Turning her on her back, he quickly expressed the placenta and with his hand on the abdomen pressed the uterus forcibly downwards and backwards, and administered ergot by the mouth and by hypodermic injection. The bleedings, which had been checked by the pressure, came from a rent of the posterior wall of the uterus and the cervix, and the examining fingers could be passed directly into Douglas's pouch. He packed the rent with gauze wrung out of biniodide of mercury lotion, and kept up pressure on the uterus for two hours. The gauze was removed in 24 hours. No douche was given, and no septic symptom arose, and her recovery was uneventful. The child weighed five pounds, and was puny. At the end of three weeks it developed pneumonia owing to a chill, and died after two days' illness. The placenta was a placenta previa marginata, and the rupture had occurred through the entire cervix and lower portion of the placental site.

It was well known that in cases of placenta previa the wall of the uterus was not strong, and in some cases fatty degeneration of the uterine muscle had been discovered. What exactly set up the rupture in these cases was difficult to tell. A severe pain, accompanied by an expulsive effort, was sufficient to start the rent, and once started it was apt to enlarge mechanically. As to the treatment, laparotomy and suture would have been extremely difficult and almost certainly fatal. And it was impossible to suture the rent *per vaginam*, especially in a dirty Chinese home.

Dr. F. H. Champneys said that the case was remarkable in several ways. The small size of the child, the absence of malpresentation, the absence of interference, and the absence of anything in the history to account for the accident combined to make it worthy of record. As to the treatment, he thought it was perfectly correct; the plugging of the rent with gauze was

the most successful treatment in cases in which the fetus and placenta had not escaped into the peritoneal cavity.

Dr. G. E. Herman concurred with what Dr. Champneys had said as to the merit of the paper. Dr. Maxwell had quoted some current statements, without however endorsing them as his own, and therefore he could hardly be held responsible for them. He said that in placenta previa the uterus had been observed to be soft. It was true that some writers had said so; others had said it was hard. He himself did not think there was any marked or constant difference in consistence between the uterus with placenta previa and any other pregnant uterus. It had also been said that spontaneous rupture of the uterus was due to fatty degeneration, and in that he followed the statements of eminent writers on midwifery. But he (Dr. Harman) knew of no good evidence to show that fatty degeneration of the uterus was present in cases of rupture of the uterus. Fatty degeneration of the uterus had been said to take place in the puerperium, but the more recent researches of Helme showed that it was no part of the process.

Dr. Drummond Robinson, in reference to points raised by Dr. Herman regarding fatty changes in the involuting uterus, stated that he had had the opportunity of examining microscopically two specimens of involuting human uterus. Careful staining with osmic acid failed in both instances to demonstrate the presence of fat.

Dr. Herbert Spencer said that the case was one of unusual interest, and had been judiciously treated and well recorded. He was pleased to find that in two cases mentioned by the author in which gauze-packing had been employed, recovery ensued. Dr. Spencer has called attention to this method of treatment in a paper read before the Society last year, giving notes of four cases successfully treated in this way. His previous experience had been that every case of rupture of the uterus, about eight in all, had died. At the present time it was usual to recommend abdominal section for complete rupture of the uterus: but that operation, especially if followed by hysterectomy, was generally too severe a shock for a patient suffering from a rupture of the uterus, and if those with experience of this accident would publish all their cases as he had done, he had no doubt that the results of hysterectomy would compare very unfavorably with those given with gauze packing.

Dr. Amand Routh had seen one case of spontaneous rupture of the uterus with placenta previa. The patient was eight months pregnant, and had had several attacks of hemorrhage. Under deep anesthesia the cervix was found rigid, and it was not easy to insert the finger. An anterior marginal placenta-

tion was found. The tongue of placenta was separated from the lower uterine segment, podalic version performed, and the leg brought down to the half-breech, which was left *in situ* for nature to complete the delivery. In about twenty-four hours, the patient's doctor being then in charge, labor pains came on and the child and after-birth were spontaneously expelled. In two days septicemia was evident, and the doctor then found that the uterus had ruptured anteriorly. In spite of all treatment the patient died. He had no doubt that Dr. Maxwell's treatment by packing the rent with antiseptic gauze was the correct one to adopt, arresting hemorrhage and securing drainage.

The President thought the treatment was not only excellent in "a dirty Chinese home," but was the very best treatment in a London or any other hospital with every appliance available. The treatment of rupture of the uterus by packing with gauze was most successful in saving life. He certainly considered that much of his success was due to the fact that the parts had not been rendered septic by the accoucheur's hands. He related details of a most extensive rupture of the uterus which was treated by packing, this being renewed under chloroform every day for twelve days in succession, and then less frequently. The patient then became very ill, and at last a large slough was extracted from the right broad ligament, and ultimately the patient recovered.—*Brit. Med. Jour.*

Aniodol, the new Antiseptic in Obstetrical Practice.

At the recent Paris Congress, Pinard gave the weight of his great authority in favor of this new remedy, which was first used by Professor Quenil, of Marseilles. Throughout France, obstetricians have become aware of the immense benefits to be derived from a substance which is at once powerful, harmless, and trustworthy. Apparently aniodol has no vogue outside of France, and for that reason Dr. Sedan, of Marseilles, brought up the topic before the obstetrical section of the congress.

A series of seventeen cases from the Maternity of the Conception, at Marseilles, was reported by Sedan. In each case puerperal infection appeared to be under way, and aniodol seemed to regulate the attacks. The same antiseptic is also in regular use in the surgical wards of the Hotel Dieux, at Marseilles.

After Sedan had finished the delivery of his paper, Pinard made the following statement:

"I employ aniodol in my service: aniodol soap is simply a wonderful substance, and is of special value as a deodorant. Aniodol injections quickly suppress the fetor of lochia.—*Obstetrics.*

The Treatment of Fissure of the Nipple.

Dombrovsky, says the *Deutsche Aerzte-Zeitung*, for October 1st, advises bathing the nipple with a 2 to 5 per cent. solution of potassium permanganate several times a day, and says that a cure will result in a week at the most. The first few applications are slightly painful, but the pain soon subsides. Nursing need not be interrupted; before the breast is offered, the nipple is washed with warm water, and the adjacent parts are covered with some waterproof material, or with a thick linen compress having an opening cut in it for the nipple to project through.—*N. Y. Med. Jour.*

The Real Value of Quinin in Labor.

Fussel (*Therapeutic Gazette*, January 15th, 1901), thinks quinine is not so frequently used as it should be in cases of labor. He has never found it to fail when the labor pains were slow and inefficient from uterine inertia. Given in 15 grain doses the drug causes an increase of force and frequency of uterine contractions exactly resembling normal labor pains. Cinchonism did not occur in these cases, and the employment of the drug frequently obviated the use of forceps.—*Am. Med.*

Vomiting of Pregnancy.

Monin (*British Medical Journal*) has been struck by the resemblance which the symptoms presented by certain pregnant women bear to those of hypersecretion. Gastric pain, heartburn, acidity, nausea, and vomiting, occurring especially in the morning, and relieved by taking food, are all symptoms commonly observed both in hypersecretion and during pregnancy. As a consequence of the suggestiveness of this observation, satisfactory results have been obtained in the case of pregnant women by administering daily five doses of sodium bicarbonate, each consisting of 30 grains, given in a capsule.—*Medical Brief.*

In *American Medicine* for June 8th a report is given of the 26th annual meeting of the American Gynecological Society, which was held in Chicago, on May 30th, 31st and June 1st. On the third day a symposium on Cesarean Section was held. We subattend the reports of some of the papers:

Circumstances which Render the Elective Section Justifiable in the Interest of the Child Alone.—By DR. REYNOLDS.

(1) The Cesarean section performed late in labor, or on the presence of infection of the uterus or other complicating constitutional conditions, has been shown by the experience of almost

every operator who has tried it, to have so high a mortality as to be totally unjustifiable when performed in the interest of the child alone; (2) when a Cesarean section is performed on healthy women, early in labor, and under otherwise favorable circumstances, for merely mechanical indications, it has, in skilled hands, no mortality other than the fractional percentage incidental to all considerable operations *per se*; (3) the inconveniences and high morbidity rate of symphysiotomy render it considerably inferior to the section as an operation of choice, but it is an operation which, as compared to craniotomy or prolonged and forcible high forceps work without it, involves almost no increased risk to life. He, therefore, believes it to be the operation of choice in the somewhat limited number of neglected cases (*i.e.*, those for which the Cesarean is ruled out) in which the pelvic contraction is within the range where the extraction of a living child without symphysiotomy is difficult or impossible, but after symphysiotomy is safe or easy; (4) the induction of premature labor for contracted pelvis results in so high a fetal mortality as to be unwarranted when placed in opposition with the performance of the Cesarean section at the beginning of labor and in favorable cases.

The Place of Symphysiotomy as Contrasted with Section.— By CHARLES JEWETT, New York.

Dr. Jewett presented the following conclusions: Symphysiotomy is still a very useful operation within a very limited range of pelvic contraction. It is suited to conditions in which only very little additional pelvic space is required for delivery. It is a valuable recourse, therefore, in cases in which forceps unexpectedly prove inadequate. Axis-traction forceps, with the aid of posture, should always be tried before resort to symphysiotomy. Its results would be much improved by restricting it to pelvis with a conjugate of not less than 7.5 c.m., 3 inches. Under equally favorable conditions, its total mortality should be no greater than that of Cesarean section. When the pelvic space permits, it should replace Cesarean section in the presence of exhaustion. It may be elected primarily as an alternative of Cesarean section, when the operator can be assured that the degree of obstruction is well within its safe limit. Here the choice of operation is largely a matter of individual preference. Within its proper field, symphysiotomy is better than Cesarean section for an operator of little experience in abdominal surgery.

Indications as Furnished by Pelvic Contractions.—By J. W. WILLIAMS, Baltimore.

In 2,123 cases delivered in the Obstetric Department of the Johns Hopkins Hospital, 278 (13.1 per cent.) had contracted

pelves. The pelves were measured both externally and internally, and designated as contracted when the conjugata vera was 10 cm. or less in generally contracted, and 9.5 cm. or less in flat pelves. Nine hundred and forty-one of the patients were white, and 1,182 black. Contracted pelves occurred in 6.91 per cent. of the former, and 18.1 per cent. of the latter. That is, in every fourteenth white, and every sixth black woman; 199 of the 278 cases ended spontaneously (71.57 per cent.). The number of spontaneous labors decreased with the increase in pelvic contractions, as shown by the following table:

Conjugata vera 10-9 cm.,	77.28 per cent. spontaneous.
Conjugata vera 8.9-8 cm.,	61.54 per cent. spontaneous.
Conjugata vera 7.9-7 cm.,	33 $\frac{1}{3}$ per cent. spontaneous.
Conjugata vera 6.9-5.5 cm.,	0 per cent. spontaneous.

The cases requiring operation were delivered by high forceps, version, symphysiotomy, Cesarean section, craniotomy upon the dead child, or embryotomy, according to circumstances, giving a gross fetal mortality of 12.96 per cent., and a gross maternal mortality of 2.88 per cent., which, by deducting the cases in which the death of the child or the mother was not due to us, gave a corrected mortality of 4.32 per cent. and 0.72 per cent. respectively.

In view of the markedly improved results following Cesarean section, the indications for its use should be widened. Thus we find that Zweifel, Olshausen, Reynolds, Bar, Charles, and Cragin have performed 162 operations, with five deaths, a mortality of 3 per cent. We, therefore, believe that in uninfected cases the upper limit for the absolute indication for Cesarean section should be advanced from 5.5 to 7 cm., and the relative indication from 7 or 7.5 to 8.5 for flat, and 9 cm. for generally contracted pelves. With the absolute indication, the operation should be done either at the end of pregnancy or the onset of labor; but when the relative indication is present, the woman should be allowed to go into the second stage of labor, and have bearing down pains for one hour, when if the head does not show signs of moulding or descending, Cesarean section should be performed, instead of forceps upon the movable head or version. So that at present Cesarean section for the relative indication should compete with high forceps or version, instead of with craniotomy upon the living child, as in the past. On the other hand, if the patient be infected, or her surroundings such that an aseptic operation cannot be performed, high forceps or version should be attempted, followed by craniotomy in case one fails to deliver the child by their means, and Cesarean section reserved for those cases in which an absolute indication is present on the part of the pelvis.

The Relative Merits of Bipolar Version with Slow Extraction and Accouchement Force in the Treatment of Placenta Previa.—By DR. HENRY D. FRY, Washington, D.C.

The advantage of bipolar version is the ability to successfully perform it with very little dilation, and with consequently less loss of blood. In placenta previa a fatal result is usually due to hemorrhage or sepsis. The hemorrhage is unavoidable and incident to the dilation of the os, consequently the method requiring the least degree of dilation necessary to perform version will naturally be expected to give the least hemorrhage. After dilation be obtained in sufficient degree to insert several fingers, further continuance of the process by manual means is likely to endanger the integrity of the soft parts. The artificial dilation sufficient to perform bipolar version is comparatively safe, while that necessary for the insertion of the hand and internal version is dangerous. The rapid delivery of the infant in accouchement force adds additional risk of rupture. Fry summarizes the histories of fourteen patients—50 per cent. of whom were primipara. Bipolar version and slow extraction were employed nine times; membranes ruptured and delivery left to nature, one; tampon and natural delivery, one; forceps extraction, four times, including one application to the after-coming head following bipolar version. All of the mothers recovered, and five of the infants were born alive.

Stypticin in Uterine Hemorrhage.

Baldt has an article in the July number of the *Amer. Journal of Obstet.* on this subject. The drug is a hydrochlorate of cotarnine, cotarnine being a derivative of narcotine, one of the alkaloids of opium. When death occurs through its administration, it is produced by paralysis of the respiratory centre. Baldt has found it of service in the following conditions: Profuse and irregular menstruation in virgins.—It should be taken continuously for three or four months, in doses of 0.05 (grammes?) three times daily, except during menstruation, when the dose should be taken at intervals of two or three hours until the flow is diminished. Profuse but not irregular menstruation.—Commence administration four days before the expected flow, and give it as above. Hemorrhage accompanying pelvic inflammation after delivery. Where hemorrhage does not cease after the removal of portions of retained decidua. A typical bleeding during the climacteric period, for which no pathological condition can be found.—A few large doses (two or three grains) should be given. Bleeding from subinvolution during the puerperium. In a few instances of bleeding during pregnancy.—It does not produce uterine contraction. In some cases of endometritis.

Under the following conditions the results of the use of the drug were unsatisfactory: Endometritis fungosa; pains of dysmenorrhea; endometritis associated with chronic metritis, or retro-flexion or version; in hemorrhage from fibro-myomatous tumors.

If a quick action from the drug is wanted, it is best to use the remedy subcutaneously. With antiseptic precaution two to three grains, dissolved in sterile water, should be injected into the buttocks and repeated after four to six hours. Two to three injections usually suffice, after which the remedy may be given by the mouth, either in capsules or in tablets. The doctor has given up to five grains without producing any untoward results.

K. C. M.

OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF G. STERLING RYERSON, J. T. DUNCAN AND J. O. ORR.

Measles: Complications Involving the Ear and the Eye.

In the *Occidental Medical Times*, A. Barkan remarks that inflammation of the middle ear forms a regular link in the chain of events during an attack of measles. About the third day after the eruption, a discharge is almost always present (if the case is at all severe) in the cavity of the middle ear. This has been shown by *post-mortem* examination of cases at that period. Many of these cases recover without treatment, but in severer cases, not only may rupture of the membrane take place, but extensive disorganization of the parts occurs. This sometimes leads to cerebral complications and death. It is well, then, to know the preventive measures, some of which may be taken in every case where danger is threatened. Barkan puts first the blowing of the nose, "miner's fashion," that is, with one nasal canal always open. Second, the nose and naso-pharynx may be sprayed with Dobell's solution, or listerine (1 to 5). Third, warmth to both body and ear. Fourth, introduce carbolate of glycerine (5 to 10 per cent.) into the external meatus. Fifth, repeated leeching behind the ear and in front of the tragus. In spite of all these measures, however, a prompt and liberal lancing of the membrana tympani may be necessary.

The Eye.—Conjunctivitis is one of the earliest symptoms of measles. This, however, usually passes off without treatment. During the succeeding two or three months, however, various eye troubles are seen, generally produced by the dyscrasia of the measles. The commonest of these are, phlyctenular ophthalmia, inflammation of the cornea, and inflammation of the

lids. These can generally be removed by the simplest treatment. In severer cases, however, optic neuritis may be seen, which may, or may not, lead to blindness.

Blindness Due to Tobacco (*Tobacco Amblyopia*).

It is a well-known fact that ordinary tobacco, either smoked or chewed, may cause great impairment of sight. Many have supposed that tobacco grown in Cuba is comparatively harmless, and, in proof of this, it has been stated that Cubans have no tobacco amblyopia. But C. E. Finlay (*Archives of Ophthalmology*) shows that this is not the case. During a residence of eight years in Havana, he had ninety-two cases of alcohol and tobacco amblyopia. Some of these cases improved under treatment, others did not, and one acute case went on to total blindness of both eyes.

A Case of Amblyopia Due to Excessive Tea Drinking.

An article by E. W. Henry, in the *Ophthalmic Review* (abstracted in the *Journal of Eye, Ear, and Throat*), shows that strong tea may produce subnormal acuteness of vision. The patient was a man of 57, who did not use tobacco, who drank very little, but who used freely excessively strong tea. He complained of dazzling and mistiness of the eyes, and his vision was reduced nearly one-third. Under treatment and stoppage of the tea, vision improved in three months to normal, the dazzling disappeared, and he had no further trouble.

J. T. D.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Deafness in Children.

Yeanley, in *Pediatrics*, June 1st, 1901, pleads for a proper recognition of the importance of early recognition of ear trouble in children. In young children under three or four, unless it is looked for, partial deafness, even of a considerable degree, is usually unnoticed by the physician, and even if noticed by him, it is hard to make parents believe it. Always see if hearing is impaired during and after an attack of coryza. If adenoids are suspected, examine, and if present, remove if there is any deafness. If left till drum has lost transparency, removal will not improve hearing. This class of case is too frequent. Always treat discharge from ears. It is criminal to tell parents that a child will outgrow deafness or discharge. The earlier the amount of deafness is ascertained, and curability or not determined, the

sooner are we able to place the child in the best position for being educated to the best advantage. In a child under two, close observation is necessary in many instances to determine if deaf or only backward, but it is possible to determine. A child, bright in other ways, who at two years cannot speak, is probably deaf.

Earache in children is of special importance and is greatly neglected. Many a puzzling febrile attack would be explained if the ears were more frequently examined. Ear trouble in children is usually inflammatory. Small babies are particularly hard subjects to spot ear trouble in; hence the necessity of routine examination of ears in obscure febrile attacks. Even mild colds in the head should be treated, and the relief which has been often given by incision of drum membrane in cases of meningitis (?), etc., is familiar to all pediatricists. Loss of weight and elevation of temperature in babies always demands examination of the ear.

Much of the neglect may be explained by the extreme difficulty of obtaining even a glimpse of the drum membrane in young children. Even experts are often at fault. In one case especially I remember there was delirium, very high temperature, vomiting, constipation, rapid respiration, and a good deal of bronchitis. The physician in charge diagnosed pneumonia of both sides, but as in a day or two there was no improvement, a consultant was called in, who decided that the pulmonary signs were not severe enough for pneumonia, and that the trouble was due to teething and the bowel trouble accompanying. Treatment for this was of no avail, and the symptoms were even worse than before, meningitis being now suspected. Evacuation of pus from the ear cleared the whole case up in twenty-four hours.

To properly see the drum membrane in a young child, an anesthetic must be used. It is inconvenient, and the parents will no doubt usually object to such a (to them) wild-goose chase, but if the reason is carefully explained, as a general thing consent is cheerfully given.

C. S. M.

L'Ovo Lecithene.

A summary of an account given by M. Laucereau, at the Academy of Medecina, Paris, June 18th, 1901.—*Gazette des Hopitaux*.

He mentioned that some very interesting works on this subject had been published by various investigators, which showed that egg lecithine has a very marked action on the nerve phenomena governing general nutrition. Proceeding from this point of view, M. Laucereau applied medication by egg lecithine to diverse maladies, where malnutrition was

severe and dangerous. He gave these observations made by him in two patients with pancreatic diabetes, in an advanced stage in each, and who were declining daily in spite of all efforts to relieve them. On giving large doses of egg lecithine (50 centigrammes daily), not only did their emaciation cease, but they gained weight rapidly. Their general condition also improved. He then stated that in every case in which he had used egg lecithine, in patients attacked by various diseases in which malnutrition was severe, the results had been the same, viz., repair of forces and increase in bodily weight.

A young man, of eighteen with osseous tuberculosis, amyloid degeneration of the kidneys, and abundant albuminuria, took egg lecithine for fifteen days, 30 centigrammes a day, his weight increasing 3 kilogrammes.

A child of six years, extremely thin and ill-nourished, coughing and having fever every evening (incipient phthisis), was given egg lecithine for a month (20 centigrammes a day), her weight increasing 2 kilogrammes, and her general state improving very noticeably.

A girl of eight years, with broncho pneumonia, and in a state of considerable emaciation, took 20 centigrammes of egg lecithine daily for a month; 2 kilogrammes gain in bodily weight.

M. Robin made some remarks on the caution necessary in using a food which has the inconvenience of augmenting the quantity of uric acid excreted.

M. Laucereau will direct some researches on this head.

C. S. M.

Saline Injections in Summer Diarrhea.

Saline injections, subcutaneous or per rectum, are extremely useful in severe cases of summer diarrhea, especially where there is much prostration. This is a fact known to every practitioner, and but rarely used, for some reason or another. If used per rectum, flush the bowel thoroughly with the saline solution, using from two to four quarts, according to the child. Enough will remain and be absorbed to be of considerable benefit.

This procedure I have found of great value in cases of extreme marasmus. How frequently it should be employed and in what amounts, will depend on the judgment of the physician. Flushing is not necessary usually, simply the direct injection per rectum of a small quantity of the solution.

C. S. M.

Stimulants for Heat Depression.

In all young children, during the days of depressive heat, vitality is so lowered that many cases of illness will occur unless some means are taken for prevention. In sick infants, in summer, stimulation always suggests itself naturally, but

rarely is it thought of for children who are not visibly ill. Whiskey or Nux Vomica tincture, the latter by preference, should be given in small doses two or three times a day during all the very hot weather. If this were done, it would surprise many to see the effect in lessening the number of restless days and nights, not to speak of the more serious cases of slight or severe indigestion and diarrhea. Also, if the children are on milk diet, the strength must be less by one quarter to one third, the difference in bulk made up by adding water.

C. S. M.

Editorials.

BRITISH CONGRESS ON TUBERCULOSIS.

The British Congress on Tuberculosis for the prevention of consumption was opened by the President, His Royal Highness the Prince of Wales, in the Queen's Hall, London, July 22nd, and closed July 26th. It is said to have been a great success in all respects. Professor Koch created quite a sensation by announcing that his recent experiments had proved that human tuberculosis and bovine tuberculosis were radically different diseases. He had found that cattle could not be affected with human tuberculosis. He acknowledged that the counter-proposition that human beings could not be affected with bovine tuberculosis was more difficult to prove; but, personally, he was satisfied that such was the case.

The following quotation from Osler's recent address on Medicine will give in a few words the views heretofore held by the leaders of the profession. In tuberculosis "the ways of infection are by inhaling the dried sputum of consumptives, drinking infected cow's milk, or eating infected meat." The acceptance of Koch's theory would wipe out the greater part of this. As far as we can learn at the time of writing, from the meagre reports we have received, it was generally considered that Koch had not proved his case, and that much more evidence will have to be produced before his statement can be considered correct.

By many the opinion is freely expressed that Koch should not have made a statement of such importance without further investigation. It is quite possible, if not probable, that his action may do great harm. A writer in the *Toronto Evening News* speaks on this aspect of the question as follows: "But in spite of the dissent of the highest authorities on medical science, it is not difficult to see that Dr. Koch's theory will work much harm by reviving the dispute as to the necessity for the strict inspection of meats and milk, and infusing fresh courage into the dealers who in many cases, and this Province among them, in spite of the fact that medical opinion was then

entirely against them, almost succeeded in defeating the law which places their business under public surveillance. We have only to recall how difficult it was for Toronto to secure from the Legislature the measure providing for the inspection of dairies by a municipal officer, to realize how powerful are the interests which are opposed to some of these sanitary laws. In that contest they had not a single valid argument on their side. If the fight is renewed they will have behind them the opinion of one of the greatest bacteriologists in the world, and it is consequently of the highest importance that that opinion be tested and proved to be absolutely wrong, or absolutely right. So far it rests on a very flimsy foundation."

Further investigations in connection with the subject will be watched with great interest. A strong commission was appointed at the meeting to enquire into the relation between human and bovine tuberculosis.

INCIDENTS OF SUMMER.

A large proportion of our citizens, including children and adults, look forward to summer from year to year with pleasant anticipations. It is the chief holiday season of the year. It unfortunately happens that the whole community, with the pleasure seekers, have to encounter certain dangers. One of the most important of these is that arising from excessive heat. The list of fatalities from this cause in such cities as New York and St. Louis has already been large this year. In our own cities and towns in Canada we have suffered in a similar way in a slight degree.

The excessive heat of the last week of June drove large numbers out of our cities to the ordinary summer resorts. Such travellers have to encounter new dangers in connection with defective sanitation in summer hotels. We have had occasion during the last few years to speak of the great improvement which has taken place in this respect, particularly in the Muskoka district, chiefly through the work of Dr. P. H. Bryce, of Toronto, the Secretary of the Provincial Board of Health. Notwithstanding such improvements certain dangers still exist in some localities. To find this out it is not neces-

sary to go farther than our 'Toronto Island, where we believe serious dangers exist in some of the crowded portions.

The most strikingly tragic incidents of summer are, however, deaths by drowning. The list of such accidents is deplorably large, and it seems that no amount of precaution is able to make it much smaller. We are glad to notice that nearly all of our children who go to summer watering places nowadays learn to swim—boys and girls alike. One of the dangers not sufficiently recognized is that arising from diving in shallow water. We have had some sad examples of fractured vertebrae and spinal hemorrhages from this cause in Toronto.

We are glad to be able to say that there never was a time when the managers of summer resorts, the health authorities and the parents of children made greater endeavors to guard against the accidents of summer than they have during the last few years.

MEDICAL EXPERT EVIDENCE.

We are much pleased to have the opportunity of publishing in this issue a paper on "Medical Expert Evidence" by E. F. B. Johnston, K.C., Toronto, taken from the *Canada Law Journal*. Mr. Johnston is a distinguished lawyer who has had great experience in trials requiring much evidence from physicians and surgeons. Our readers will find from a perusal of the article (see page 430) that the author treats the subject in a broad way, and is eminently fair to our Canadian medical experts.

We have been told by certain members of the legal profession that neither doctors nor lawyers, as a rule, make good witnesses. It is sometimes difficult to know the meaning of this term. Sometimes the lawyer in search of good medical witnesses wants unscrupulous and dishonest physicians, who are sufficiently clever and plausible to swear for one side and appear to tell the truth. There are fortunately not many of this sort, but Mr. Johnston thinks he may sometimes be found. When found, however, he doesn't last; he cannot long deceive either the judge or the counsel; the two latter can generally manage to prevent him from deceiving even the ordinary stupid jury. The good medical witness, in our opinion, is he

who knows his subject, gives short, plain answers in ordinary English, shows no bias and never attempts to get either clever or smart.

The latter portion of Mr. Johnston's article is worthy of careful consideration. He is anxious to do away with everything like partisanship on the part of medical witnesses, by the appointment of a medical board of witnesses, having the following qualifications: competence, experience and moral standing in the profession.

ANTISEPTIC SURGERY.

There is much difference of opinion as to the best method of preparing the patient and the hands for an operation. The statements of so eminent a surgeon as C. B. Lockwood (*Indian Med. Record*, May 15th) will prove of interest. He does not advise the preparation of the patient the night before. This is done an hour or so before the operation, and in the cases of women and children generally when under the anæsthetic. The part is shaved if necessary. It is then thoroughly washed with soap and water to remove dirt, fat and epithelium. The remaining fat is extracted by means of ether, turpentine, or benzine, turpentine being the preferable agent. The skin is then saturated for two minutes with biniodide of mercury in methylated spirit, 1 in 500.

The practice with regard to the hands is to cut the nails short, wash well with soap and water, remove fat with turpentine, and immerse in a bowel of 1 in 500 of biniodide of mercury in methylated spirit.

Instruments are sterilized by being boiled for ten or fifteen minutes in water containing one drachm of washing soda to the pint. They are then wrapped in antiseptic gauze and placed in a solution of carbolic acid, 1 in 60.

Silk is made sterile by boiling for twenty minutes in water. No chemical should be used. It is then placed in a jar containing 1 in 20 carbolic acid. Fine silk may be freely buried. In most cases the thicker silk can be buried to a moderate extent. It is of importance to note that silk should never be employed to secure a septic structure, as the pedicle of an

inflamed appendix. In such a case the bacteria in the tissue are liable to cause the silk to be thrown and give rise to suppuration.

Catgut can be made perfectly safe by scrubbing it well on a board with soap and water. It is then put in ether for twenty-four hours. Next it is soaked for seventy-two hours in a watery solution of biniodide of mercury of the strength of 1 part in 250. It may be kept in this solution indefinitely and retains its strength for many months.

ETIOLOGY OF GENERAL PARALYSIS.

General paralysis, like most diseases, has been the subject of close study for many years. It attacks, as a rule, those of a bright mental disposition, it is very fatal and progressive in its course, and its pathology has been one of the *terra incognita* of medical science. Dr. Lewis C. Bruce, the Superintendent of Perth Asylum, in the *British Medical Journal* for 29th June, advances the opinion that the disease is of toxic origin. This ground has been taken for some time, but along the line that the toxic condition was due to syphilis. Dr. Bruce does not take this ground. He argues that general paralysis is caused by a gastric-intestinal intoxication. His position is that bacteria of different kinds, but mainly the bacillus coli, attack the system through the mucous membrane of the digestive canal. He contends that serum obtained from a patient in a state of remission, and injected into cases in their early stage, point to this as the proper line of treatment.

CANADIAN MEDICAL ASSOCIATION.—WINNIPEG MEETING.

Last time of warning! The Winnipeg meeting will be held August 28th to 31st, 1901. For months the officers of the Association, and especially the local committee, have been doing good work in the interests of this meeting. Already quite a sufficient number of papers have been promised by able physicians of Canada and the United States to ensure success

from a scientific standpoint. Apart from that feature, however, there is a certain amount of sentiment which will have influence with many. The Canadian Medical Association is a national concern, in which we take some (though not quite enough) pride, and to which we should ever extend a loyal support. The Winnipeggers, the Manitobans, the North-Westerners, and the far Westerners are all taking a deep interest in this meeting, and want to see the Easterners turn out in force. No matter how great the crowd may be, we understand there will be plenty of room in the prairies for the whole Winnipeg overflow, and all will receive a warm welcome. A third feature is the fact that Winnipeg, Manitoba, and the whole (once) Wild and Woolly West are well worthy of a visit. The advice, already given many times, to spend your holiday this year by taking such a trip, is all right. Our readers are invited to appear in Winnipeg on the morning of August 28th.

The following is a list of some of the papers already promised :—

The Address in Medicine—J. R. Jones, Winnipeg.

The Address in Surgery—O. M. Jones, Victoria.

The Address in Gynecology—Thomas S. Cullen, John Hopkins, Baltimore.

The Early Diagnosis and Treatment of Pulmonary Tuberculosis—D. Gilbert Gordon, Toronto.

The Nose and Throat in General Practice—John Hunter, Toronto.

Remarks on Some Interesting Diseases of the Age—G. H. Burnham, Toronto.

Orthopedic Treatment of Deformities and Disabilities Resulting from Paralysis—B. E. McKenzie, Toronto.

Title to be announced—D. J. Gibb Wishart, Toronto.

A Practical Way of Distinguishing Between the Human and Animal Blood—G. Silverthorne, Toronto.

Infectious Pneumonia—W. S. Muir, Truro, N.S.

Sclerotic Ovaries—A. L. Smith, Montreal.

Removal of Large Tumor from Os Uteri After Labor Had Set in—A. Armstrong, Arnprior.

Tuberculosis in Milk—Prof. Russell, University of Wisconsin.

The Present Outbreak of Smallpox in America—H. M. Bracken, Health Officer, Minnesota.

Hematology of the Blood—L. H. Warner, New York.

Skin Diseases; Lantern Demonstration—F. I. Shepherd, Montreal.

The Treatment of Consumption in Special Institutions—Dr. Richer, Montreal.

Disposal of Tuberculous Sputum—J. H. Elliott, Gravenhurst.
Title to be announced - G. Chambers, Toronto.

Chronic Ulceration of the Stomach Simulating Cancerous Disease; Relation of a Case of Gastro-enterostomy With Murphy Button; Recovery—J. F. W. Ross, Toronto.

Report of Cases Treated With the Hot Air Bath—W. H. Peplar, Toronto.

The Development of the Race—J. N. Hutchison, Winnipeg.

Some Forms of Gastric Hyperacidity and Their Treatment—C. F. Martin, Montreal.

Syphilis as Seen by the Ophthalmic Surgeon—F. Buller, Montreal.

On the Necessity of a Better Recognition and Isolation of Trachomatous Patients in Canada—W. Gordon M. Byers, Montreal.

Title to be announced—J. L. Bray, Chatham, Ont.

Epidemic Cerebro Spinal Meningitis; a History of Some Cases—James McKenty, Grctna, Man.

Pulmonary Tuberculosis, its Treatment and Prevention—A. P. Proctor, Kamloops, B.C.

Mild Smallpox—G. A. Kennedy, Macleod, Alta.

Title to be announced—C. J. Fagan, Victoria, B.C.

Hyperchlorhydria—A. J. Macdonell, Winnipeg.

The Question of Medical Defence—Russell Thomas, Lennoxville, P.Q.

Title to be announced—F. F. Westbrook, University of Minnesota.

Surgical Treatment of Cancer—Sir William Hingston, Montreal.

Further particulars furnished by the Committee of Arrangements.

The Canadian Pacific Railway have issued a circular giving very thorough information regarding the necessary preliminaries to secure the return trip to Winnipeg for single fare, also regarding side trips from Winnipeg. We are reprinting a large portion of the circular for the information of those who may not receive a circular.

How to Get There.—Purchase a ticket for Winnipeg from the agent at the place of departure, and get from him a standard certificate (which is a receipt for one full single fare). When registering at the meeting, leave the certificate with the Treasurer, and it will be returned, signed by the Secretary, on the morning of August 30th.

This certificate, when presented to the station agent at Winnipeg, will entitle bearer to a return ticket to his destination

free of charge, if the route to Winnipeg has been via all rail, and the member desires to return by the same route.

Particulars.—If the route to Winnipeg has been via all rail, a ticket to return by the Lake route will be issued on payment of \$4.25.

If the route to Winnipeg has been via the Lake route, a ticket to return by the same route will be issued on payment of \$8.50; or, having gone by the Lake route, it is desired to return via rail, a ticket will be issued on payment of \$4.25. (Via the Lake route the rate includes meals and berth.)

Side Trips After the Meeting.—Tickets to points in Manitoba, the Canadian North-West, the Kootenay District, Banff, Glacier, etc., and the Pacific Coast points, will be issued to delegates at the one-way first-class limited rate for the round trip.

The rates are good going August 20th to 28th, and returning until September 30th, 1901, and include the member or delegate, his wife and daughters. Members travelling by the Lake route should secure berths at an early date from W. Maughan, City Passenger Agent, C.P.R., Toronto.

Hotel Accommodation.—The Clarendon, \$2.00 to \$3.50 per day; The Leland, \$2.00 to \$3.50; The Queen's, \$1.50 to \$2.50; The Winnipeg, \$1.00; The Brunswick, \$1.00; The Seymour, \$1.00; The Vendome, \$1.00; The Imperial, \$1.00.

Members desiring to obtain accommodation in advance should communicate with Dr. James Patterson, Winnipeg.

The Portage avenue car runs from the C.P.R. station to the Y.M.C.A. Building (the place of meeting); all other cars running on Main street will give transfers at the corner of Main and Portage avenue.

On Saturday, August 31st, there will be a free excursion through the finest wheat-growing sections of the Province of Manitoba. The train will pass through such important places as Portage la Prairie, Carberry, Brandon, Souris, Glenboro', Holland, and Treherne. The trip out and back will be by two different lines of railway, thus giving the delegates an excellent opportunity of seeing the country in its various aspects.

The General Secretary has received a letter from Dr. A. S. McCaig, of Sault Ste. Marie, on behalf of the medical men of that place extending an invitation to members of the Association from eastern points to stop over a day and a night at the Soo as guests of the medical men there.

The Soo is a growing place and alive with industry, so that

any who can will be wise to accept this kindly hospitality and spend a most pleasant day and an evening's entertainment there.

Members intending to do this should communicate at once with Dr. McCaig.

The British Columbia Medical Association will hold the annual meeting in Victoria on the 5th and 6th of September. The original date was in August, but it was changed to coincide with the arrival on the coast of the excursion from the Canadian Medical Association leaving Winnipeg about September 1st. The profession of the coast extend a cordial invitation to all eastern brethren to attend and join in the discussions and partake of their hospitality.

Medical Council Examiners for 1901-2: Dr. H. B. Anderson, Toronto, Anatomy, descriptive; Dr. W. G. Anglin, Kingston, Theory and Practice of Medicine; Dr. R. N. Horton, Brockville, Midwifery; Dr. A. Primrose, Toronto, Physiology and Histology; Dr. J. W. Edgar, Hamilton, Surgery; Dr. W. Gunn, Clinton, Medical and Surgical Anatomy; Dr. Graham Chambers, Toronto, Chemistry and Toxicology; Dr. J. W. Schooly, Welland, Materia Medica and Pharmacy; Dr. J. H. McLellan, London, Assistant Examiner to the Examiner on Surgery and Diseases of Women; Dr. A. Haig, Kingston, Assistant Examiner to the Examiner on Medicine and Diseases of Children; Dr. G. H. Field, Cobourg, Second Assistant Examiner to the Examiner on Medicine, Pathology, Therapeutics and Bacteriology; Dr. E. T. Adams, Toronto, Homeopathic Examiner.

A Presentation to Dr. J. Ferguson.

The Sons of Scotland presented Dr. John Ferguson with a handsome silver service, July 2nd, at a meeting held in the Temple Building. The accompanying address had the following concluding words: "The Grand Camp now places in your hand these few pieces of plate, in the sincere hope that they may prove a token to you and your family of the confidence which your fellow-countrymen of the Sons of Scotland have in your distinguished abilities and sound judgment, as well as of the

high esteem in which you are personally held." Dr. Ferguson made a suitable reply, from which we extract the following: "Why a Scotch National Society in this country? In the Scottish character there is the highest development of the patriotic sentiment, the finest vein of sympathy, the strongest love of permanency, the purest form of religious thought, the sweetest type of family life, the keenest appreciation of learning, the deepest pathos, the richest humor, the greatest courage. Transfuse these into our own, the society's, and the nation's life. By cherishing all that is good in Scotland we will elevate the standard of our country. We will not be less Canadian by being more Scottish. To love Canada as our forefathers loved Scotland, to fight for Canada as our forefathers fought for Scotland, to die for liberty as our forefathers died for liberty, to sing as our forefathers sang, to think as our forefathers thought, to stand together as our forefathers stood together, will bode no evil to the land of the Maple Leaf, nor the Sons of Scotland."

EXAMINATION OF COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

The following candidates passed the final examination:—
 W. J. Abbott, Brockville; D. M. Anderson, Toronto; F. W. Birkett, Ottawa; W. T. Burns, Toronto; E. L. Brown, Chester-ville; C. T. Bowles, Ottawa; A. Bourque, St. Eugene; F. A. Clarkson, Toronto; H. L. Collins, Kincardine; A. C. Campbell, St. Thomas; H. E. Cluiterbuck, Toronto; C. J. Currie, Toronto; E. N. Coutts, Durham; W. R. Cook, Fordwich; B. A. Cohoe, Toronto; W. H. Cronyn, London; F. A. Cleland, Meaford; A. Chevrier, Ottawa; H. G. Downing, Woodstock; H. Dittrick, St. Catharines; I. Dixon, Walkerton; D. R. Dunlop, Fordwich; C. C. Elliott, London; J. W. Edwards, Kingston; E. Flath, Toronto; J. I. Ferguson, London; J. W. Fitzgerald, Sanborn; C. C. Grant, St. Thomas; H. S. Hutchison, Toronto; V. A. Hart, Dalston; D. C. Jones, Brockville; W. B. Cayler, Toronto; T. W. Kirby, Sault Ste. Marie; F. E. McLoughlin, Hamilton; A. K. Morgan, Adelaide; A. H. Montgomery, Brantford; A. J. G. MacDougall, Toronto; W. G. Montgomery, Wroxeter; J. E. Martin, Langton; F. W. Marlow, Blackstock; M. D. McKichan, Hamilton; W. F. McKay, Beaverton, Miss Minnie McDonald, Hagersville; A. F. McLaren, Lancaster; P. W. O'Brien, Toronto;

J. M. Potts, Sterling; H. E. Paul, Newburg; A. R. Perry, Mount Forest; C. T. Pigot, London; A. W. Richardson, Kingston; R. M. Rutherford, Hawkesbury; E. S. Ryerson, Toronto; H. P. Ross, Exeter; E. J. Stubbs, Stratford; W. E. Storey, Windsor; G. B. Snyder, Ridgeway; G. S. Sadler, Pakenham; H. Softley, Feversham; J. H. Trout, Toronto; C. C. Tatham, Listowel; W. G. Tyner, Kingston; C. L. Taylor, Wardsville; S. Thompson, Strathroy; F. C. Trebilcock, Enniskillen; J. P. F. Williams, Georgetown; J. Webb, Hamilton.

INTERMEDIATE.

The following candidates passed the intermediate examination:—W. J. Abbott, Brockville; D. M. Anderson, Toronto; J. W. Atkinson, Avon; W. T. Burns, Toronto; W. J. Brown, Lindsay; J. G. Bogart, Kingston; C. T. Bowles, Ottawa; A. Bourque, St. Eugene; F. W. Birkett, Ottawa; A. C. Campbell, St. Thomas; C. J. Currie, Toronto; J. B. Coleridge, Ingersoll; O. W. Colbeck, Toronto Junction; C. C. Campbell, Listowel; W. A. Cerswell, Bond Head; W. R. Cook, Fordwich; R. H. Carscadden, Morewood; F. J. Colling, Toronto; F. J. Carrharris, Kingston; B. A. Cohoe, Toronto; W. H. Cronyn, London; F. A. Cleland, Meaford; A. Chevrier, Ottawa; F. P. Coates, Streetsville; H. E. Clutterbuck, Toronto; J. T. Dixon, Hamilton; G. Davis, Cayuga; J. E. Drury, Dalston; I. Dixon, Walkerton; C. R. Elliott, Alvinston; J. W. Edwards, Kingston; W. C. Fawcett, London; C. D. Ferguson, Port Stanley; J. I. Ferguson, London; T. S. Genge, Halleford; W. S. Grimshaw, Kingston; A. J. Grant, London; H. S. Hutchison, Toronto; John Herod, Toronto; W. T. Hamilton, Motherwell; V. A. Hart, Dalston; R. J. Kee, Stanley Mills; D. C. Jones, Brockville; W. H. Lowry, Guelph; C. P. Lusk, Toronto; D. R. Lonsborough, Seaforth; A. H. Montgomery, Brantford; A. J. G. MacDougall, Toronto; W. C. Montgomery, Wroxeter; K. MacKinnon, Guelph; R. T. MacLaren, Columbus; A. D. MacIntyre, Glencoe; G. E. R. McCartney, Binbrook; M. D. McKichan, Hamilton; G. D. McIlwraith, Hamilton; W. McIntyre, Rosedale; J. McCulloch, Port Perry; W. F. McKay, Beaverton; J. A. McCollum, Toronto; Minnie McDonald, Hagersville; W. B. McDiarmid, Maxville; L. McLeay, Gravenhurst; J. M. Oswald, Windsor; R. N. Parent, Windsor; R. Parsons, Emery; G. R. Pirie, Hamilton; H. E. Paul, Newburgh; A. Rannay, Georgetown; A. B. Rutherford, Owen Sound; E. Richardson, Brockville; C. H. Reason, London; J. Rogers, Belmont; A. W. Richardson, Kingston; R. M. Rutherford, Hawkesbury; W. C. Redmond, Bethel; W. E. Storey, Windsor; G. W. Smith, Almonte; J. A. Smith, Hamilton; J. Smillie, Bluevale; A. T. Steele, Orangeville; R.

D. Sproat, Milton; G. S. Sadler, Pakenham; A. Turner, Southwold; J. H. Trout, Toronto; C. C. Tatham, Listowel; W. G. Tyner, Kingston; D. G. Whealey, Toronto; C. S. Wainwright, Orillia; L. N. Whitley, Londesboro'.

UNIVERSITY OF TORONTO.—RESULTS OF FINAL EXAMINATION.

First-Class Honors.—F. A. Clarkson, G. E. R. McCartney, J. T. Dixon.

Second-Class Honors—B. A. Cohoe, D. G. McIlwraith, J. A. McCollum, M. D. McKichan, F. A. Cleland, W. H. Cronyn, G. W. Smith, A. T. Steele, A. H. Montgomery, W. E. Storey, J. A. Campbell, F. J. Colling, C. J. Currie, W. A. Cerswell.

Pass.—W. J. Abbott, C. C. Campbell, J. D. Chisholm, *H. A. Christie, *T. A. Davies, I. Dixon, C. D. Ferguson, W. T. Hamilton, R. J. Kee, *R. W. Leader, D. S. Lighthall, J. W. Moak, C. S. Morton, W. McIntyre, K. McKinnon, P. W. O'Brien, H. R. Parent, J. F. S. Riches, A. B. Rutherford, J. A. Smith, J. D. Stanley, C. E. Treble, C. S. Wainwright, *C. A. A. Warren, D. G. Whaley, L. N. Whitley, A. E. Wickens.

*The following are required to pass supplemental examinations before completing the final examination :

Medicine.—H. A. Christie, T. A. Davies, C. A. A. Warren.

Surgery.—T. A. Davies.

Obstetrics.—H. A. Christie, T. A. Davies, R. W. Leader, C. A. A. Warren.

Therapeutics.—T. A. Davies, R. W. Leader, C. A. A. Warren.

Jurisprudence.—R. W. Leader.

Degree of Doctor of Medicine.—Beverley Drake Harison, Helen MacMurphy, William Edgar Robertson, William Charles White.

MCGILL UNIVERSITY.—MEDICAL FACULTY.

At the recent Convocation the following received the Degree of M.D., C.M.:—T. F. Bayfield, E. R. Belanger, J. J. Blake, J. G. Browne, B.A., J. Bruce, B.A., P. E. Butler, R. P. Campbell, B.A., D. A. Carlyle, C. Cartwright, H. W. Coates, H. McN. Collison, J. Collison, F. W. Crang, C. H. Dalton, A. S. Donaldson, J. W. Duncan, W. J. Eagan, R. L. Ellis, J. E. Fleming, A. T. Fuller, B.A., R. L. Gardner, B.A., J. D. George, J. R. Goodall, B.A., R. J. O. Harley, J. T. Hope, A. C. P. Howard, B.A., E. N. McL. Hunter, G. F. Jackson, R. DeL. Johnston, B.A., A. Johnston, J. L. Johnston, J. H. Jones, Sydney Jones, B.A., A. L. Kendall,

R. H. Ker, B.A., F. E. Lawlor, G. E. Learmonth, B.A., T. H. Leggett, H. M. Little, B.A., T. H. Lunney, D. S. Mackay, M. Mackay, B.A., S. D. Mackenzie, J. W. L. Macneil, C. Macpherson, C. A. McDonald, E. E. McDonald, E. A. Martin, W. A. Meighen, S. Millar, G. H. S. Miller, J. C. Moore, D.V.S., A. D. Morgan, E. J. Mullaly, W. E. Newcombe, J. K. Niven, M. T. O'Sullivan, A. Patterson, B.A., E. Penner, B.A., H. Pittis, L. H. Redon, B.A., B. A. Richards, J. Roberts, C. G. Robertson, L. F. Robertson, B.A., R. D. Robertson, L. E. Robidoux, B.A., H. B. Rogers, C. K. Russel, B.A., E. M. Russell, C. A. Rutherford, W. T. Ryan, B.A., C. W. Sanders, C. Shearer, R. L. Shearer, A. S. Simpson, E. G. W. Simpson, B.A., A. E. W. Snyder, G. L. Stentafor, J. Stevenson, B.A., C. L. Stewart, C. A. Stewart, D. A. Taylor, W. L. Taylor, J. A. Ward, E. H. White, B.A., W. L. Wiggin, B. E. Wiley, W. Williams, L. B. B. Wilmot, J. J. Wilson, D. E. Winter, H. B. Wyman, B.A.

Personals.

Dr. A. C. Hendrick has commenced practice in Toronto.

Dr. Clouse, of Toronto, returned from Buffalo July 16th.

Dr. Charles Temple spent a portion of July on the Georgian Bay.

Dr. Geo. A. Bingham and wife are spending their vacation abroad.

Dr. R. A. Stevenson, of Toronto, left home on July 29th for England.

Dr. L. L. Palmer, of College street, has left for England on a short visit.

Dr. Wm. Britton, of Toronto, spent the greater part of July in Muskoka.

Dr. Wm. A. Sargent, of Springbrook, Hastings County, went to Europe early in July.

Dr. Marlow, late House Staff, St. Michael's Hospital, is practising with Dr. N. A. Powell.

Dr. Montizambert, of Ottawa, attended the London Tuberculosis Congress, July 22nd.

Dr. Fred Grasett, of Toronto, left his home July 17th to spend a holiday with his family.

Dr. George Baptie, of Ottawa, has been appointed Associate Coroner for the County of Carleton.

Dr. J. Frank McConnell, Las Cruces, N. M., is spending his holidays with his parents in Toronto.

Dr. G. W. Howland is now taking a holiday on the Georgian Bay. He will go to England shortly.

Dr. Leask, late House Staff, St. Michael's Hospital, is practising on the Canada Central Railroad.

Dr. J. Arthur Sutherland, of Dawson City, was married on July 8th to Miss Nora Grice, of Seattle.

Dr. J. Gow has been appointed resident physician, Mount Airy Children's Hospital, near Baltimore.

Dr. G. H. Maclaren is now in Scotland. He expects to spend some time at post-graduate work in Europe.

Dr. John L. Davison, of Toronto, left for Tadenac, Georgian Bay, on July 19th, where he will remain one month.

Dr. R. V. Fowler, formerly of Colborne, now practising in Perth, has recovered from a somewhat severe illness.

Dr. Bertram Spencer left Toronto July 24th for Balsam Lake, where he will spend a portion of his holidays.

Dr. E. D. Carder has been appointed surgeon to one of the C. P. R. steamers running between Vancouver and Japan.

Dr. Alex. Primrose returned to Toronto July 29th, after spending a month in the Maritime Provinces. He delivered the address in Surgery at the meeting of the Maritime Medical Association in Halifax, July 3rd and 4th.

Dr. Hutchinson, of Montreal, paid a visit to Dr. Bruce Rioridan, of Toronto. The two doctors left Toronto July 11th to do the Pan-American.

Dr. Wm. Oldright, of Toronto, is spending the summer at Muskoka. During his absence Dr. A. J. MacKenzie is taking charge of his practice.

Dr. Francis C. Mewburn, of Toronto, celebrated his sixtieth anniversary of his wedding day, July 25th. He received his license to practise in 1838.

Prof. Osler, of Baltimore, went to England early in June. After a short stay in London he went to the Continent, but returned for the Tuberculosis Congress, July 22nd.

Dr. Graham Chambers has been appointed Professor of Dermatology and Assistant Professor of Clinical Medicine at the Women's Medical College. He spent a portion of the month of June doing the hospitals of New York, and a portion of the month of July holidaying in Muskoka.

Dr. P. A. Gillespie, formerly of Toronto Junction, now of Winburg, South Africa, was recently presented with a medal and clasp, and was also granted a bounty for his loyal services to the British Crown during the war.

Dr. D. J. Gibb Wishart, of Toronto, left on July 30th to visit first the Gravenhurst Sanatorium, and then Go Home Bay, Georgian Bay. Before returning he will go to Winnipeg to attend the meeting of the Canadian Medical Association.

Dr. H. R. Woolbert, Major in the Indian Medical Service, visited Toronto, July 13th, and was the guest of Dr. Charles O'Reilly. Major Woolbert has charge of a large district in India, which contains 22 dispensaries, and a prison with 500 prisoners.

Dr. F. C. Macdonald, of Scarboro, Ont., who was appointed to the staff of Civil Surgeons of the South Africa Field Force in December, has returned to Canada with the Canadian Scouts. He reached Quebec July 29th, and Toronto, July 31st, going on the same day to Scarboro.

The following physicians of Toronto went to Niagara Falls, via St. Catharines, July 17th, on the invitation of the owners of the new electric railway which has recently been extended to a point above the Falls: Drs. Jas. Thorburn, Chas. O'Reilly, J. E. Elliott, Bruce Riordan, Geoffrey Boyd.

Obituary.

WM. IRVING, M.B.—Dr. Irving, of St. Mary's, died at his home, June 20th. He was educated in Trinity Medical College, and graduated, M.B. Trinity University, in 1874. After graduating, he practised for a short time on Yonge Street, near Toronto. He soon went to Exeter, thence to Kirkton, and finally settled in St. Mary's in 1893.

EDWARD AARON GRAVELY, M.C.P.S.O.—Dr. Gravelly, of Cornwall, died June 17th.

JOHN GRANT, M.R.C.S.ENG.—Dr. J. Grant, of Napanee, died suddenly at his home in the latter part of June. He had been practising about forty years.

Book Reviews.

Essentials of the Diseases of Children. By WILLIAM M. POWELL, M.D. Third edition. Thoroughly revised by ALFRED HAND, JR., Dispensary Physician and Pathologist to the Children's Hospital, Philadelphia. 12mo, .259 pages. Philadelphia and London: W. B. Saunders & Company. Price, \$1.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

In this revised edition numerous additions and changes have been made. The section on infectious diseases has been rewritten, as well as many of the paragraphs on pathology. A number of new chapters have been added, among others one on infant feeding. It will be found a very good book both for students and practitioners. As the author announces, the substance matter has been taken chiefly from the works of Eustace Smith, Lewis Smith, Goodhart, Starr, and Meigs & Pepper.

The Care of the Baby. A Manual for Mothers and Nurses, containing Practical Directions for the Management of Infancy and Childhood in Health and in Disease. By J. P. CROZER GRIFFITH, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, Philadelphia. Second revised edition. 12mo, 404 pages, with 67 illustrations in the text and 5 plates. Philadelphia: W. B. Saunders & Co., 925 Walnut Street. 1898. Price, \$1.50 net. Canadian Agents: J. A. Carveth & Co., Toronto.

Dr. Griffith has written one of the best books on this subject that has yet appeared. In his second edition he has enlarged the work considerably, and with his usual painstaking and careful precision has submitted it to a complete revision. The book is a very practical one, and covers thoroughly what it undertakes to do on its title-page. The author lays down clearly the lines that the parent or nurse must follow in the care of the child with safety, and without usurpation of the place of the physician. A dissemination of the knowledge contained in the book would often lead to medical consultation in instances in which it is now neglected through ignorance or indifference. The book is altogether a useful and most commendable one, not alone for mothers and nurses, but for medical students and practitioners as well.

The Pathology and Treatment of Sexual Impotence. By VICTOR G. VECKI, M.D. From the second German edition, revised and enlarged. Demy 8vo, 291 pages. Philadelphia: W. B. Saunders & Co., 925 Walnut Street. 1899. Price, \$2.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The work deals systematically and in detail with the anatomy of the male genital organs and the physiology of the sexual act. The author then discusses the etiology of impotence and

its forms, which he subdivides into five classes, viz.: 1. That due to congenital malformation and defects of the sexual organs. 2. That due to acquired defects. 3. Consecutive impotence. 4. That due to inherited predisposition. 5. Neurasthenic impotence. The diagnosis, prognosis and prophylaxis are next treated of in separate chapters, and finally the subject of treatment is dealt with in a most exhaustive manner in all its phases. This section is especially "up-to-date."

In conclusion, will say that the volume before us deals very ably with one of the most important subjects connected with our social and our pathological existence; and that, accordingly, its contents should be mastered by every conscientious medical practitioner.

A Clinical Text-Book on Medical Diagnosis for Physicians and Students. Based on the Most Recent Methods of Examination. By DR. OSWALD VIERORDT, Professor of Medicine at the University of Heidelberg. Authorized translations, with additions, by FRANCIS H. STUART, A.M., M.D., of New York, from the fifth enlarged German edition. Royal 8vo, 603 pages and 194 wood cuts, many of them in colors. Philadelphia: W. B. Saunders & Co. 1898. Price, cloth, \$4.00 net; sheep or half morocco, \$5.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The fact that five editions of this work have been called for in nine years is sufficient proof that the efforts of the authors have met with the success which they deserved. The author writes with particular clearness on the examination of the respiratory apparatus. It is very difficult to express in words the pathological sounds and signs which are encountered in percussing and auscultating the chest, but a careful study of Dr. Vierordt's remarks will greatly aid the student in understanding the alterations from the normal in both methods of procedure.

The chapter on the examination of the circulatory apparatus contains a vast amount of information; the description of the variations in the rhythm and character of the heart sounds is facilitated by some simple diagrams. The modern requirements of the examination of the digestive apparatus are met by full directions as to the chemical and microscopical analysis of the digestive juices.

The chapter on the examination of the urinary apparatus is also marked by the judgment exercised on the selection of the chemical processes required.

The directions for the examination of the nervous system form one of the best chapters in the book, especially that part of it which deals with electrical tests.

The work will hold its place as one of the most valuable and creditable treatises of its kind, and is in every way worthy of the success it has attained.

An American Text-Book of Gynecology, Medical and Surgical, for Practitioners and Students. By ten of the leading Gynecologists of America. Edited by J. M. BALDY, M.D., Professor of Gynecology in the Philadelphia Polyclinic. Imperial octavo of 718 pages, 341 illustrations in the text and 38 colored and half-tone plates. Second edition, revised. Philadelphia: W. B. Saunders & Co., 925 Walnut Street. 1898. Price, cloth, \$6.00 net; sheep or half-morocco, \$7.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The system of American text-books has attracted the favorable commendation of the medical world from the appearance of the first volume to the present time. The second edition of this magnificent work of Dr. Baldy's is a great improvement upon its predecessor in many respects. A number of new figures have been added and old ones cut out. Amongst the latter we are glad to see that nearly all the figures of instruments have been eliminated. The new figures are all good and clear, especially those illustrating abdominal hysterectomy and vaginal hysterectomy with the use of clamps. Amongst other new and revised matter we notice a description of Freund's and Baldy's operations for the treatment of prolapse of the uterus. The section upon Diseases of the Bladder and Urethra has been practically re-written, and the whole book bears evidence of careful revision. The list of authors remains the same as in the first edition. The book is altogether a most valuable one, and will be especially useful to the student, inasmuch as it contains a large amount of information upon special points in the teaching of gynecological operations, which are not to be found in the ordinary text-books on this subject. It is a clearly written, up-to-date, and safe, practical guide in the treatment of the diseases of women.

Diseases of the Intestines. By DR. I. BOAS, Specialist for Gastro-Intestinal Diseases in Berlin. Authorized translation from the first German edition, with special additions by SEYMOUR BASCH, M.D., New York City. With 47 illustrations, 560 pages, Svo. Cloth, \$5.00; sheep, \$6.00. New York: D. Appleton & Co., Publishers, 72 Fifth Avenue.

We have before us in the present volume a work that should be in the hands of all practitioners. It deals with a subject that is of the greatest interest to the general practitioner. The distinguished author devotes his attention entirely to diseases of the gastro-intestinal canal, and is an undoubted authority on this subject. In the present volume the alimentary tract below the stomach is solely dealt with. The anatomy and physiology of the intestines is most completely analyzed in the first fifty pages.

It is the first work that has appeared in the English language that deals entirely with the diseases of the intestinal tract. When we remember how important are the functions of the intestines, and how dependent every other function of the

body is upon the healthy action of the intestines, we can readily see how essential a thorough knowledge of its functions are. In all systems of medicine the intestinal diseases are too curtly disposed of. The distinguished author has elaborated at the end of each chapter a complete reference index to both the author quoted and the article referred to. This is a great boon to the investigator, who can not only corroborate the fact, but can also read the whole article and glean much from the context. The subject of treatment occupies a most prominent part in the work, and in this feature we recognize a most important fact. Treatment is of the utmost importance, and too often we find everything else but treatment elaborately set out, while the most important part is dismissed with a line or two. This is not the condition found in the present work. Dr. Boas believes that the surgeon and physician should work together, and that the physician should be the one to advise as to the necessity of operative interference. We concur in this idea, and while operation may be the result of consultation, yet the physician should be the one to point out its necessity early enough to be of benefit to the patient and not cast discredit on the operation or operator. We can heartily recommend this work to the attention of the profession, feeling satisfied that it will be of the greatest service. The publishers have spared no pains in making it a most attractive volume.

A Manual of Physiology, with Practical Exercises. By G. N. STEWART, M.D., D.Sc., M.D. (Edin.), D.P.H. (Camb.), Professor of Physiology in the Western Reserve University, Cleveland. With 894 pages, 336 illustrations and 5 colored plates. Fourth edition. Philadelphia: W. B. Saunders & Co., 925 Walnut Street. Price, \$3.75 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The third edition of this manual shows numerous alterations in the text, while a great many experiments have been added in the practical exercises. The book is splendidly arranged, and shows the tendency in the teaching of this subject at the present time. One might as well teach anatomy or chemistry without practical work as to give instruction in physiology without practical exercises.

The subject is presented in an unusually attractive, clear, and forcible way, and the practical experiments are arranged so as to make the matter of the text clear and impressive. The text is very well suited for the medical student, as it does not go too much into details, and yet presents the subject completely. Altogether the book is an excellent one, and the best we have seen for students' purposes. It will also be almost as useful to the practitioner, being concise and complete, and at

the same time abreast of the times, containing the results of the progress made in this branch of recent years.

In conclusion, we will say that the author is a good teacher, and knows how to impart the knowledge possessed by him to others in a way that makes a dry subject interesting and easily understood. This is an art of the highest order, and invaluable in a work of this character.

The Hygiene of Transmissible Diseases: their Causation, Modes of Dissemination and Methods of Prevention. By A. C. ABBOTT, M.D., Professor of Hygiene and Bacteriology, University of Pennsylvania. Third edition, revised and enlarged. Octavo, 351 pages, with numerous illustrations. Philadelphia and London: W. B. Saunders & Company. Cloth, \$2.50 net. Canadian agents: J. A. Carveth & Co., Parliament Street, Toronto, Ont.

During the interval that has elapsed since the appearance of the first edition, investigations upon the modes of dissemination of certain of the specific infections have been conspicuously active, and through them much new light has been shed and many novel suggestions have been made; especially is this the case with regard to the roles of insects and rodents as disseminating factors. Wherever practicable, these views have been embodied and discussed. The sections especially on Malaria, Yellow Fever, Plague, Filariasis, Dysentery and Tuberculosis have been both revised and enlarged.

A Text-Book of the Practice of Medicine. By DR. HERMAN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic in the University of Zurich. Translated and edited by AUGUSTUS A. ESHNER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Two octavo volumes of over 600 pages each; over 150 illustrations. Philadelphia and London: W. B. Saunders & Co. 1901. Price per set: cloth, \$6.00 net. Canadian agents: J. A. Carveth & Co., Toronto, Ont.

The Germans lead the world in internal medicine, and among all German clinicians no name is more renowned than that of the author of this work. Dr. Eichhorst stands to-day among the most eminent authorities of the world, and his Text-Book of the Practice of Medicine is probably the most valuable work of its size on the subject. The book is a new one, but on its publication it sprang into immediate popularity and is now one of the leading text-books in Germany. It is practically a condensed edition of the author's great work on Special Pathology and Therapeutics, and it forms not only an ideal text-book for students, but a practical guide of unusual value to the practising physician. As the essential aim of the physician will always be the cure of disease, the fullest and most careful consideration has been given to treatment.

Obstetrics and Gynecologic Nursing. By EDWARD P. DAVIS, A.M., M.D., Professor of Obstetrics in the Jefferson Medical College, Philadelphia, etc., etc. Philadelphia: W. B. Saunders & Co. 1901. Price, \$1.75 net. Canadian Agents: J. A. Carveth & Co., Toronto.

In writing a text-book for nurses, it is difficult to impart enough information without giving more than is necessary. In the work before us we consider that Dr. Davis has erred occasionally in both of these directions. The most serious matter with which we have to find fault is the lack of *definite* instructions to the nurse as to the method of securing and maintaining her own personal asepsis. The illustrations—many of them the same that adorn the American Text-Book of Obstetrics—are good. The mechanics of the book are in W. B. Saunders' best style.

K.C.M.

Anatomical Atlas of Obstetrics, with Special Reference to Diagnosis and Treatment. By DR. OSKAR SCHAEFFER, Privatdocent in Obstetrics in the University of Heidelberg. Translated by J. CLIFTON EDGAR, A.M., M.D., from the Second Revised German Edition. Philadelphia and London: W. B. Saunders & Co. Canadian Agents: J. A. Carveth & Co., Toronto. Price, \$3.00 net.

Atlas and Epitome of Labor and Operative Obstetrics. By DR. O. SCHAEFFER, of Heidelberg. From the Fifth Revised German Edition. Edited by J. CLIFTON EDGAR, M.D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 14 lithographic plates, in colors, and 139 other illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Canadian Agents: J. A. Carveth & Co., Toronto. Cloth, \$2.00 net.

These are two separate volumes, but such constant reference is made in the text of the one to the text and plates of the other, that we may consider them together.

In the "Anatomical Atlas, with Special Reference to Diagnosis and Treatment," we think that the anatomical part is much better done than the diagnosis and treatment. The plates and descriptions of the varieties of deformed pelves are especially good. The pages are small and the mind of the reader is confused by the use of different kinds of types, italics, and parentheses. We do not find the arrangement of the subject-matter clear. "The Atlas and Epitome of Labor and Operative Obstetrics" is much the better book of the two. The arrangement of the text is much simpler and clearer. With regard to episiotomy the author says: "If there is no reason to anticipate a complete tear into the rectum, episiotomy should not be performed, because the incisions do not heal so readily as an ordinary incomplete perineal tear." This experience seems to remove the only excuse that the operation of episiotomy had.

The latter half of the book consists of a series of "folders," each one of which has twelve or fourteen plates representing

the mechanism of labor under some special condition, or an obstetric operation. These are good.

On the whole, we should say that the books are of value to the specialist, and especially to the teacher of obstetrics rather than to the general practitioner or student. K. C. M.

A Practical Treatise on the Sexual Disorders of the Male and Female. New (second) edition. By ROBERT W. TAYLOR, M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. In one handsome octavo volume of 435 pages, with 91 illustrations and 13 plates in color and monochrome. Cloth, \$3.00 net Philadelphia and New York: Lea Brothers & Co.

The second edition of this most excellent work is exactly what one would expect from the distinguished author, being improved by the addition of all the advancements made since its first appearance. The style is free and conversational, yet clear, concise and thorough. The early chapters review the anatomy and physiology of the sexual organs in the male and female with a completeness that enables the reader to grasp the subject matter in its entirety. The illustrations are up-to-date, and materially aid the text. The illustrations of abnormal and pathological conditions are largely original, and are far beyond the average, because they are drawn by an artist who is acquainted with medical and surgical diseases, and only passed by the author when they clearly represent the disease under discussion. Anyone reading Taylor can refer to the illustrations and depend on them representing typical and authentic conditions.

The subject of seminal vesiculitis has received much more attention in this volume than in the previous one. It is right that it should, because, in the reviewer's opinion, this subject involves the solution of many distressing conditions, the relief of which can never be accomplished while the vesiculitis remains uncured. In giving directions for examining the vesicles, we would like to see the author include the knee-chest position for examination, as it will enable the examiner to reach at least an inch higher than any other method. The subject of enlarged prostate is only dealt with as a factor in sexual disorders. We are also of the opinion that the treatment by massage of the enlarged and engorged prostate in these cases will also be of great advantage.

We can heartily recommend the work, and are satisfied that it should be in the possession of all practitioners. The typography and illustrations are far superior to the average medical work, and the publishers can be congratulated on the success of their share of this admirable volume.